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MONTHLY WEATHER REVIEW

SUPPLEMENT No. 13

AEROLOGY No. 8

I. FREE-AIR DATA AT DREXEL AND ELLENDALE AEROLOGICAL STATIONS APRIL, MAY, AND JUNE, 1918

BY

THE AEROLOGICAL DIVISION, WILLIS RAY GREGG, In Charge

II. NOTES ON KITE FLYING

BY

VINCENT E. JAKL

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SUPPLEMENTS TO THE MONTHLY WEATHER REVIEW.

During the summer of 1913 the issue of the system of publications of the Department of Agriculture was changed and simplified so as to eliminate numerous independent series of Bureau bulletins. In accordance with this plan, among other changes, the series of quarto bulletins—lettered from A to Z—and the octavo bulletins—numbered from 1 to 44—formerly issued by the U. S. Weather Bureau have come to their close.

Contributions to meteorology such as would have formed bulletins are authorized to appear hereafter as Supplements of the MONTHLY WEATHER REVIEW. (Memorandum from the Office of the Assistant Secretary, May 18, 1914.)

These Supplements comprise those more voluminous studies which appear to form permanent contributions to the science of meteorology and of weather forecasting, as well as important communications relating to the other activities of the U. S. Weather Bureau. They appear at irregular intervals as occasion may demand, and contain approximately 100 pages of text, charts, and other illustrations. Subscribers to the MONTHLY WEATHER REVIEW receive the SUPPLEMENTS without extra charge. Copies may be procured at the prices indicated below by addressing the Superintendent of Documents, Government Printing Office, Washington, D. C.

SUPPLEMENTS PUBLISHED.

No. 1. Types of storms of the United States and their average movements. By E. H. Bowie and R. H. Weightman, Washington, 1914. 37 p. 114 ch. 4°. Price 25 cents. (W. B. No. 538.)

No. 2. I. Calendar of the leafing, etc., of the common trees of the eastern United States. By G. N. Lamb. 19 p. 4 figs. II. Phenological dates, etc., recorded by T. Mikesell at Wauseon, Ohio. By J. Warren Smith. 73 p. 2 figs. Washington, 1915. 4°. Price 25 cents. (W. B. No. 558.)

No. 3. (*Aerology No. 1.*) Sounding balloon ascensions at Fort Omaha, Nebr., May 8, 1915, etc. By W. R. Blair and others. 67 p. 23 figs. Washington, 1916. 4°. Price 25 cents. (W. B. No. 592.)

No. 4. Types of anticyclones of the United States and their average movements. By E. H. Bowie and R. H. Weightman. Washington, 1917. 25 p. 7 figs. 73 ch. 4°. Price 25 cents. (W. B. No. 600.)

No. 5. (*Aerology No. 2.*) Free-air data at Drexel Aerological Station: January, February, and March, 1916. By W. R. Blair and others. Washington, 1917. 59 p. 6 figs. 4°. Price 25 cents. (W. B. No. 603.)

No. 6. Relative humidities and vapor pressures over the United States, including a discussion of data from recording hair hygrometers for a period of about 5 years. By P. C. Day. Washington, 1917. 61 p. 7 figs. 34 charts. 4°. Price 25 cents. (W. B. No. 609.)

No. 7. (*Aerology No. 3.*) Free-air data at Drexel Aerological Station: April, May, and June, 1916. By W. R. Blair and others. Washington, 1917. 51 p. 4 figs. 4°. Price 25 cents. (W. B. No. 619.)

No. 8. (*Aerology No. 4.*) Free-air data at Drexel Aerological Station: July, August, September, October, November, and December, 1916. By W. R. Gregg and others. Washington, 1918. 111 p. 12 figs. 4°. Price 25 cents. (W. B. No. 642.)

No. 9. Periodical events and Natural Law as guides to agricultural research and practice. By A. D. Hopkins. Washington, 1918. 42 p. 22 figs. 4°. Price 25 cents. (W. B. No. 643.)

No. 10. (*Aerology No. 5.*) Free-air data at Drexel Aerological Station: January, February, March, April, May, and June, 1917. By W. R. Gregg and others. Washington, 1918. 101 p. 11 figs. 4°. Price 25 cents. (W. B. No. 651.)

No. 11. (*Aerology No. 6.*) Free-air data at Drexel Aerological Station: July, August, September, October, November, and December, 1917. By W. R. Gregg and others. Washington, 1918. 108 p. 11 figs. 4°. Price 25 cents. (W. B. No. 658.)

No. 12. (*Aerology No. 7.*) Free-air data at Drexel and the Ellendale Aerological Stations: January, February, and March, 1918. By W. R. Gregg and others; Cold winter of 1917–18. By W. R. Gregg. Description of the Ellendale Aerological Station. By V. E. Jakl. Washington, 1918. 82 p. 10 figs. 4°. Price 25 cents. (W. B. No. 660.)

No. 13. (*Aerology No. 8.*) I. Free-air data at Drexel and Ellendale aerological stations: April, May, and June, 1918. By W .R. Gregg and others. II. Notes on kite flying. By V. E. Jakl. Washington, 1918. 81 p. 1 fig. 4°. Price 25 cents. (W. B. No. ——.)

FREE-AIR DATA AT DREXEL, NEBR., AND ELLENDALE, N. DAK., AEROLOGICAL STATIONS, APRIL TO JUNE, 1918, INCLUSIVE.

By the AEROLOGICAL DIVISION, WILLIS RAY GREGG, Meteorologist, in Charge.

GENERAL STATEMENT.

During the three months April to June, 1918, inclusive, kite flights were made on all but 10 days at Drexel and on all but 3 days at Ellendale, failures in all cases being due to light winds.

The number of flights and their mean altitudes at the two stations are given in Table 1.

TABLE 1.—*Distribution and mean altitudes of kite flights at Drexel, Nebr., and Ellendale, N. Dak., during the period April to June, 1918, inclusive.*

	Drexel, Nebr.				Ellendale, N. Dak.			
	April.	May.	June.	Total.	April.	May.	June.	Total.
Number of flights	32	38	32	102	28	33	33	94
Mean altitude, meters	2,845	2,949	2,992	2,930	2,313	2,384	2,745	2,489

SPECIAL NOTES ON KITE FLIGHTS.

Drexel, Nebr.—May 20, 1918, No. 4. "At 11:29 p. m. during this flight the head kite broke away, taking with it about 1,100 meters of wire. Shortly thereafter communication over the Chicago and Northwestern telegraph line stopped, and investigation showed that there was a break in this line at a point about 6 kilometers north-northwest of the station. The broken telegraph wire was dragged to one side in the direction in which the wind was blowing. Later the kite was recovered about 7 kilometers farther on toward the north-northwest, but no kite wire could be found, except a small portion of the loops in the swivel. Several brace wires in the kite had been vaporized and one of the flat pieces of tin used in securing the cross sticks to the longitudinal sticks was considerably charred.

"A thunderstorm was observed in the west as early as 10:15 p. m., and light rain began about half an hour later. At the time of the breakaway there were three different thunderstorms at some distance from the station, in the south-southwest, southwest, and west. The approach of these was accompanied by much thunder and lightning and fairly heavy rain.

"It is evident that shortly after the breakaway the wire which the kite carried with it caught on the telegraph wire, thus enabling the kite to fly until it was struck by lightning. The lightning not only damaged the kite and destroyed the kite wire, but also severed the telegraph wire, thus interrupting communication."—*C. S. L.*

These thunderstorms, cyclonic in type, accompanied an area of low pressure that was advancing from the northwest. They were apparently carried along by a southwesterly wind at altitudes greater than those reached by the kites, viz, about 3,000 meters. The records of this and previous flights on this day (Table 5) show that large temperature gradients, super-adiabatic near the surface, and fairly high humidities prevailed to considerable altitudes, thus providing ideal conditions for the formation of thunderstorms.

Ellendale, N. Dak., May 18, 1918.—"Lightning struck the wire at 2:42 p. m. with one kite and 1,100 meters of wire out. The wire was completely burned; its combustion caused a brilliant line of blaze from the kite to the reel and was followed by a trail of smoke along the entire line. Near the reel house the molten steel set fire to dry patches of grass. Three men who were near the reel at the time were not affected; but three others, who were landing a secondary kite, were knocked prostrate, and one of them, who had his hands on the reel, felt a slight shock, which renderd his arm numb for some time. An examination of the kite showed that the lightning struck the swivel by means of which the wire is attached to the kite bridle. Although thunder lasted from 2:40 to 4:23 p. m., this was the only stroke of lightning that occurred in this vicinity."—*V. E. J.*

This thunderstorm, cyclonic in type, occurred in the southeastern quadrant of a LOW that was approaching from the region just north of Montana. It moved from southwest toward northeast, indicating the presence of southwesterly winds at considerable altitudes, and in other respects had very much the same characteristics as those observed two days later at Drexel.

The experience of the observers at Ellendale emphasizes the importance, already pointed out in SUPPLEMENT No. 11, page 5, of remaining in the reel house during the heaviest part of a thunderstorm. If at such times it is necessary to land a secondary kite, it should be brought in close to the reel house. An attempt to land it in the field might easily result in the observer's forming a short circuit for the lightning from the kite wire to the earth.

FREE-AIR TEMPERATURES.

Table 2 contains mean monthly temperatures at different levels, as observed at Drexel and Ellendale during the period April to June, 1918, inclusive; also, for purposes of comparison, the three-year means for Drexel and the five-year means for Mount Weather, Va.

TABLE 2.—*Mean monthly temperatures at Drexel and Ellendale for April to June, 1918, inclusive; also 3-year means at Drexel and 5-year means at Mount Weather, Va.*

Altitude, sea level.	APRIL.				MAY.				JUNE.			
	Drexel.		Ellendale, 1918.	Mount Weather, 5-year mean.	Drexel.		Ellendale, 1918.	Mount Weather, 5-year mean.	Drexel.		Ellendale, 1918.	Mount Weather, 5-year mean.
	1918	3-year mean.			1918	3-year mean.			1918	3-year mean.		
meters.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.
Surface [a]	[b] 7.9	8.6	[c] 6.0	.....	[d] 20.5	17.5	[e] 13.4	.....	[f] 22.8	21.4	[g] 19.0	.....
500	6.8	7.7	5.5	[h] 10.4	19.4	16.8	12.6	[h] 17.0	22.0	20.6	18.6	[h] 19.7
750	4.4	5.7	3.6	8.8	17.3	14.9	11.1	15.2	20.4	18.9	16.8	18.2
1,000	3.2	4.3	2.2	7.4	16.1	13.4	9.9	13.4	19.3	17.4	15.7	16.7
1,250	2.1	3.0	1.0	6.1	14.8	11.9	8.9	11.6	18.5	16.1	14.8	15.2
1,500	1.1	1.9	− 0.3	4.6	13.2	10.4	7.7	9.9	17.4	14.9	13.7	13.7
1,750	0.1	0.8	− 1.7	3.1	11.8	8.9	6.4	8.3	16.1	13.5	12.1	12.3
2,000	− 0.7	− 0.3	− 3.1	1.7	10.4	7.5	4.8	6.6	14.7	12.0	10.6	10.8
2,250	− 1.8	− 1.5	− 4.4	0.4	8.9	6.0	3.1	5.0	13.3	10.4	9.0	9.4
2,500	− 2.8	− 2.7	− 5.7	− 0.9	7.3	4.4	1.2	3.5	11.7	8.8	7.4	8.0
2,750	− 4.0	− 4.0	− 6.9	− 2.2	5.5	2.8	−0.6	2.0	9.9	7.3	5.8	6.6
3,000	− 5.3	− 5.3	− 8.5	− 3.6	3.7	1.1	−2.3	0.5	8.2	5.8	4.2	5.1
3,250	− 6.7	− 6.7	−10.0	− 5.1	1.9	− 0.5	−4.1	− 1.0	6.6	4.2	2.7	3.5
3,500	− 8.1	− 8.2	.....	− 6.7	0.1	− 2.0	−5.1	− 2.6	4.9	2.5	1.0	1.9
3,750	− 9.6	− 9.8	.....	− 8.2	− 1.8	− 3.6	−6.6	− 4.1	3.1	1.0	−0.8	0.3
4,000	−11.0	−11.4	.....	− 9.7	− 3.6	− 5.1	.....	− 5.7	1.2	−0.7	−2.5	−1.5
4,250	−12.6	−13.0	.....	−11.4	− 5.4	− 6.5	.....	− 7.3	−0.5	−2.3	−4.2	−3.3
4,500	−14.2	−14.5	.....	−13.0	− 7.0	− 8.4	.....	− 9.1	−2.5	−3.8	−5.9	−4.9
4,750	−15.8	−15.9	.....	−14.5	− 8.6	− 9.8	.....	−11.1	−4.7	−5.6	−7.2	−6.3
5,000	−17.4	−17.6	.....	−16.0	−10.0	−11.6	.....	−13.1	−6.7	−7.6	−8.6	−7.7
5,250	−19.0	−19.2	.....	−17.6	−11.7	−13.3	.....	−15.0	−8.9	−9.8	.....	−9.1
5,500	.....	.....	.....	.....	−12.8	−14.9	.....	−16.5	.....	.....	.....	.....
5,750	.....	.....	.....	.....	−14.9	−16.5	.....	−18.0	.....	.....	.....	.....

[a] Drexel, 396 meters; Ellendale, 444 meters.
[b] Actual 24-hour mean temperature, 7.5° C.
[c] Actual 24-hour mean temperature, 5.1° C.
[d] Actual 24-hour mean temperature, 18.7° C.
[e] Actual 24-hour mean temperature, 12.0° C.
[f] Actual 24-hour mean temperature, 23.2° C.
[g] Actual 24-hour mean temperature, 17.2° C.
[h] At surface, 526 meters above sea level.

DIURNAL SERIES OBSERVATIONS.

During the three months one series of observations of diurnal variations was made at Drexel; none at Ellendale, owing to lack of suitable power for flying at night. Several other attempts at Drexel failed because of thunderstorms or light surface winds. The one successful series was made on May 1–2 and consisted of 8 flights to an average altitude of 3,014 meters. Its duration and the temperatures observed are shown in figure 1. Weather conditions, except pressure distribution, and all other observed data may be found in Table 5. During this series high pressure (about 1,030 mb.) moved from the central Mississippi Valley eastsoutheastward to the South Atlantic States. Pressure was relatively low (about 1,005 mb.) along the Canadian border. Winds at the surface were therefore southwesterly; at higher levels, westerly. Complete data for the three months at both stations are given in Tables 4 to 9, inclusive.

GRAVITY POTENTIAL.

Table 3 contains values of gravity potential for standard gravity, 980.665 dynes, and for Drexel, Nebr., and Ellendale, N. Dak. For a brief discussion of this unit and its use in meteorological studies see Supplement No. 12 (Aerology No. 7), pages 8–9.

TABLE 3.—*Values of gravity potential, gv., for standard gravity; and for Drexel, Nebr., and Ellendale, N. Dak.*

Altitude, sea level (meters).	Standard gravity, g=980.665.									
	0	100	200	300	400	500	600	700	800	900
	gv.	gv.	gv.	gv.	gv.	gv.	gv.	gv.	gv.	gv.
0	0	98	196	294	392	490	588	686	784	882
1,000	981	1,079	1,177	1,275	1,373	1,471	1,569	1,667	1,765	1,863
2,000	1,961	2,059	2,157	2,255	2,353	2,451	2,549	2,647	2,745	2,843
3,000	2,941	3,039	3,137	3,235	3,332	3,430	3,528	3,626	3,724	3,822
4,000	3,920	4,018	4,116	4,214	4,312	4,410	4,508	4,606	4,704	4,802
5,000	4,899	4,997	5,095	5,193	5,291	5,389	5,487	5,585	5,683	5,781
6,000	5,878	5,976	6,074	6,172	6,270	6,368	6,466	6,564	6,661	6,759

TABLE 3.—*Values of gravity potential, gv., for standard gravity; and for Drexel, Nebr., and Ellendale, N. Dak.*—Continued.

Altitude, sea level (meters).	Drexel, Nebr., g=980.296.									
	0	100	200	300	400	500	600	700	800	900
	gv.	gv.	gv.	gv.	gv.	gv.	gv.	gv.	gv.	gv.
0	0	98	196	294	392	490	588	686	784	882
1,000	980	1,078	1,176	1,274	1,372	1,470	1,568	1,666	1,764	1,862
2,000	1,960	2,058	2,156	2,254	2,352	2,450	2,548	2,646	2,744	2,842
3,000	2,940	3,037	3,135	3,233	3,331	3,429	3,527	3,625	3,723	3,821
4,000	3,919	4,017	4,115	4,212	4,310	4,408	4,506	4,604	4,702	4,800
5,000	4,898	4,996	5,093	5,191	5,289	5,387	5,485	5,583	5,681	5,778
6,000	5,876	5,974	6,072	6,170	6,268	6,365	6,463	6,561	6,659	6,757
	Ellendale, N. Dak., g=980.719.									
0	0	98	196	294	392	490	588	686	784	883
1,000	981	1,079	1,177	1,275	1,373	1,471	1,569	1,667	1,765	1,863
2,000	1,961	2,059	2,157	2,255	2,353	2,451	2,549	2,647	2,745	2,843
3,000	2,941	3,039	3,137	3,235	3,333	3,431	3,529	3,627	3,724	3,822
4,000	3,920	4,018	4,116	4,214	4,312	4,410	4,508	4,606	4,704	4,802
5,000	4,900	4,998	5,096	5,193	5,291	5,389	5,487	5,585	5,683	5,781
6,000	5,879	5,977	6,075	6,172	6,270	6,368	6,466	6,564	6,662	6,760

Proportional parts.

	97									
	0	1	2	3	4	5	6	7	8	9
0	0	1	2	3	4	5	6	7	8	9
10	10	11	12	13	14	15	16	16	17	18
20	19	20	21	22	23	24	25	26	27	28
30	29	30	31	32	33	34	35	36	37	38
40	39	40	41	42	43	44	45	46	47	48
50	48	49	50	51	52	53	54	55	56	57
60	58	59	60	61	62	63	64	65	66	67
70	68	69	70	71	72	73	74	75	76	77
80	78	79	80	81	81	82	83	84	85	86
90	87	88	89	90	91	92	93	94	95	96
	98									
0	0	1	2	3	4	5	6	7	8	9
10	10	11	12	13	14	15	16	17	18	19
20	20	21	22	23	24	24	25	26	27	28
30	29	30	31	32	33	34	35	36	37	38
40	39	40	41	42	43	44	45	46	47	48
50	49	50	51	52	53	54	55	56	57	58
60	59	60	61	62	63	64	65	66	67	68
70	69	70	71	72	73	74	74	75	76	77
80	78	79	80	81	82	83	84	85	86	87
90	88	89	90	91	92	93	94	95	96	97

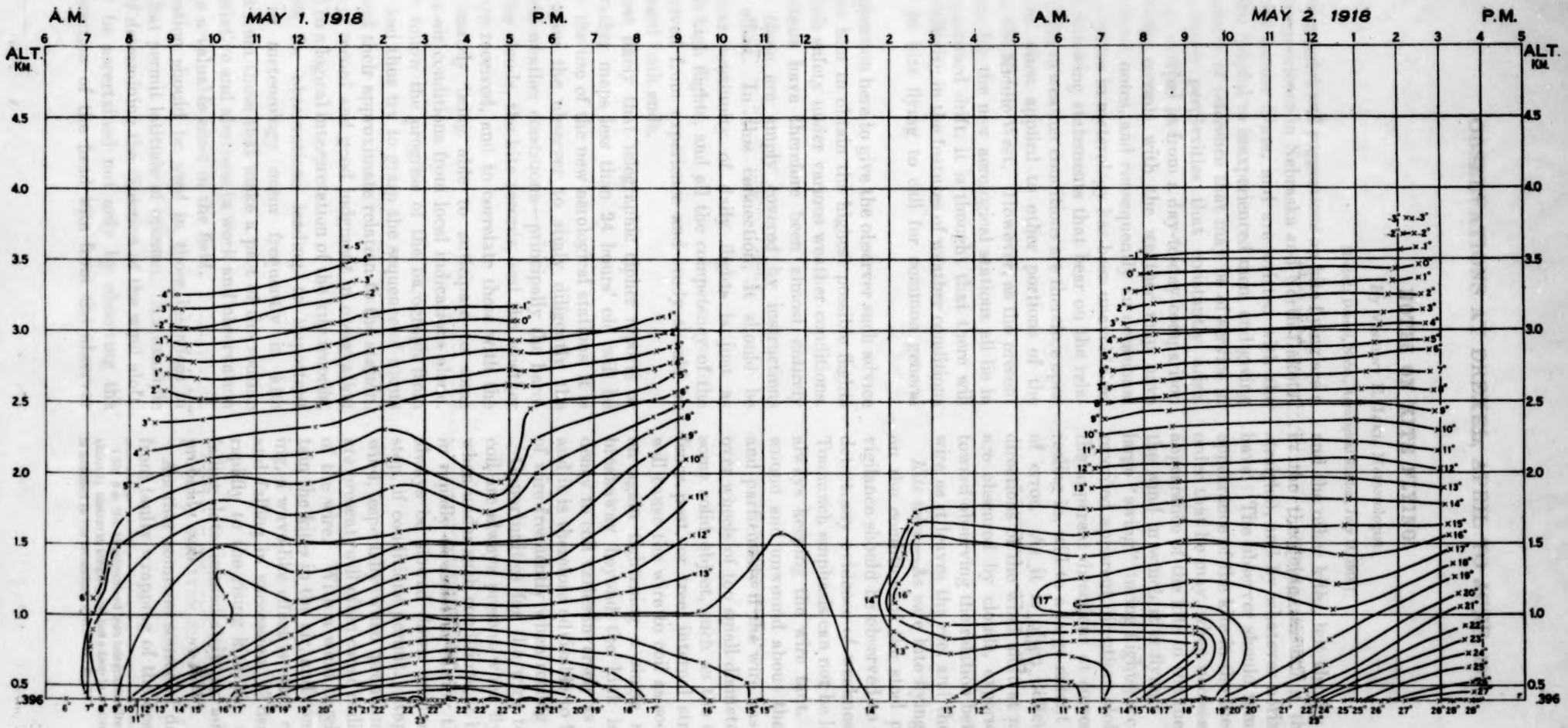

FIGURE 1—Free air temperatures, °C, above Drexel Aerological Station; observed May 1-2, 1918.

NOTES ON KITE FLYING.

By VINCENT E. JAKL, Meteorologist.

[Dated: Drexel, Nebr., Aerological Station, July 15, 1918.]

The following notes and suggestions on kite flying are a digest of field experience in Nebraska and North Dakota, principally the former State, and are written with the object of being helpful to inexperienced men, and giving them some source of reference that may be of service in solving the many perplexities that constantly arise. The deductions arrived at from a day-to-day comparison of the upper-air records with the weather map have entered into these notes, and consequently an occasional allusion to problems in meterology has been unavoidable. Many of the following statements that bear on the relation of kite flying to weather conditions are therefore open to amendment when applied to other portions of the country than the Middle West. However, as the present projected sites for the new aerological stations all lie in the general eastward drift, it is thought that there will be enough similarity in the features of weather conditions encountered in kite flying to call for common general rules.

It is the intention here to give the observer such advice as will enable him to obtain the highest possible flights consistent with safety under various weather conditions. Practical details have therefore been almost entirely omitted, as these are amply covered by instructions already in effect. In this connection, it should be remarked that continuity of daily flights is just as important as high flights, and all the competency of the observer derived from experience and study should be directed toward both ends.

As it is not likely that telegraphic cipher reports or synoptic weather maps less than 24 hours' old will be available for the use of the new aerological stations, it is incumbent upon the observer to study diligently the record of local weather conditions—principally the barograph and the clouds, the kite records, and the weather maps that are received, and to correlate these with the view of ultimately being able to anticipate to some extent upper-air conditions from local indications alone. It is well to follow the progress of the barograph from day to day, and thus try to grasp the sequence of HIGHS and LOWS, and their approximate relation to the station.

Accuracy of record and good judgment in observation are essential to a logical interpretation of the kite records. Opportunities for observations leading to important deductions in meteorology occur frequently in kite flying, apart from those that make a part of the routine record. Initiative and alertness in work and observation are therefore a valuable asset in the field.

Discrimination should be used in those instances in kite flying that permit latitude of opinion. An example is the case of determining the direction of the wind aloft. This should be ascertained not only by observing the apparent direction of the head kite from the observer and the other kites, but also by the position of the kite in the theodolite (assuming that the head kite flies straight), and by whatever horizontal movement it may have. The observer should familiarize himself with the appearance of the kite in the theodolite at close range, in order that he may, when necessary, associate an angular appearance of the kite in the theodolite with direction of the wind in which it is flying. When the kites make a large "swing" during flights, a careful comparison of the recorded apparent directions aloft when reeling out, with the apparent directions at corresponding altitudes when reeling in, will to a large extent eliminate the possibility of error. As it is often difficult to determine actual directions of the wind aloft at night and when the kites are obscured by clouds, experience should be directed toward observing the relation between the azimuth of the wire as it leaves the reel and the direction aloft.

Kite wire.—As safe kite flying is so largely dependent on the condition of the steel piano wire used, utmost vigilance should be observed to prevent injury to it and detect any evidence of weakness throughout its length. Too much emphasis can not be laid on the importance of always keeping the wire taut. After being repeatedly wound and unwound about the reel drum and pulleys, and particularly if the wire has been run under tension over wheels of too small diameter, or has rubbed against some solid object, such as the side of the reel house, a fence post, or tree, internal strains are developed that will cause the wire to coil as soon as it is slackened. If on again tightening a single ring becomes a kink, a breakaway beyond the kink is inevitable. The tendency to coil varies inversely as the diameter of the wire, and it is therefore advisable to feel out the smaller sizes of wire frequently when reeling in or out.

Opportunities for the wire to slacken sufficiently to coil are always present when flying in light winds; and when under such conditions, it becomes necessary to reel in rapidly to assist in raising the kites, the reel should always be slowed down gradually before coming to a stop, if conditions permit. Rapid reeling out in a light wind, especially when pronounced convection currents are present, will often cause coiling and probably kinking of the wire. With a wind barely strong enough to sustain the kites in the air, and convection currents prevailing, a wave-like effect is often observed, the kites rising and falling in succession. Then, if wire is played out rapidly to the rising kite, the wire between it and the falling kite immediately in advance will slacken and probably coil.

Another common source of damage to the wire arises from faulty wrapping of the heavy wire [1] used to attach

[1] No. 9 or No. 10 galvanized iron telegraph wire is used for this purpose. It is usually about 1½ meters in length, and has a loop in which is tied a cord, the other end of which is fastened to the secondary kite.—W. R. G.

secondary kites, and the injuries incident thereto. Under the direction of an experienced man, a novice should learn how to attach this wire without leaving permanent sharp bends in the piano wire. Occasionally this branch wire should be shifted a few meters [2] from its usual position on the piano wire. When, after landing a secondary kite, it is found that the cord is wrapped around the piano wire, care should be taken not to pull the cord too hard in the attempt to unwrap it, as this causes an injurious twisting strain on the wire. In an emergency, it is better to cut the cord than to try to unwrap it hurriedly.

The wire should be kept clean and slightly oiled. Incrustations of ice or frost should be wiped off when reeling in, and the wire again wiped with a piece of oiled waste when reeling out in the next flight. This wiping of the wire should be frequent; it not only serves to keep the wire from rusting, but prevents kinks passing by unnoticed. But few breakaways are caused by the pull exceeding the normal tensile strength of clean undamaged wire. Kinks, sharp bends, rust spots, or flaws in the splices cause the majority of accidents.

When to reel in.—The observer should memorize the value of the sines of angles commonly recorded with the theodolite, thereby enabling him to compute quickly approximate altitudes when necessary and to keep constantly in mind the relation between the altitude of the head kite and the amount of wire out. So long as the head kite maintains a fairly steep angle, say 30° or more, it may be assumed that the pull is at its maximum and that, barring a change in the weather conditions, reeling in will not throw the kites much higher nor materially increase the pull. Such a flight may be considered a normal one, and the number of kites to use and the distance to reel out will be clearly indicated by the dynamometer.[3]

Ordinarily the final reeling in should commence when the stationary pull shows indications of passing 200 pounds. Also, more kites should not be launched after the dynamometer reads between 150 pounds and 180 pounds, depending on the number of kites already flying. A little computation will generally settle this point. For example, when the pull is 150 pounds, with two kites, another kite is likely to increase the pull to 225 pounds; while a pull of 175 pounds, with seven kites, will probably not be increased to more than 200 pounds by the addition of another. The same line of reasoning should be used when estimating the effect on the pull of reeling in or a probable increase in wind. Given a certain pull, it is obvious that reeling in or an increase in wind velocity will augment that pull in proportion to the number of kites used. It should further be kept in mind that the tensile strength of the steel wire varies from about 260 pounds for the 0.032-inch size to about 400 pounds for the 0.044-inch size, and that the wire should be taxed to little more than half its normal capacity.

Judgment in the matter of the number of kites to use should also be influenced by the possibility of the kites ascending into a decidedly stronger wind aloft with further reeling out. The winds, of course, normally increase with altitude, but occasionally the wind gradient may be so much steeper than is ordinarily experienced as to upset calculations unless foreseen. Neglecting the increase usually found in the first few hundred meters above the ground, we may usually expect to find rapid increases of wind velocity with altitude between 1,000 and 2,000 meters above the surface. Indications of an abnormal increase with altitude will be apparent to the careful observer by the action of the dynamometer, but more especially by the tendency of the head kite to maintain or even increase its angle when reeling out.

The preceding suggestions suffice for all flights where, as already mentioned, the kites maintain a good angle. If, however, there is much wire out with many kites and the angle is low, success and safety will necessitate a rather tedious program of work. It is obvious that reeling in under such circumstances might raise all or most of the kites to such higher altitudes and stronger winds as to increase the pull to the danger point. It will then be necessary occasionally to sound the strength of the upper winds by reeling in a few hundred meters before putting on additional kites, meanwhile watching the head kite through the theodolite. If the temporary reeling in is not successful in permanently raising the kites, a note should be made, mental or otherwise, of the depth of the light wind. It will eventually resolve itself into a matter of judgment as to whether to reel in all the kites and rearrange them with a view to greater lifting surface by using more or larger kites or to continue the flight with the expectation of finally lifting them into sufficiently strong winds aloft.

After an altitude of between 2,500 and 3,000 meters has been sounded without indications of strong wind it is probable that no dangerous wind will be encountered to an indefinite height. This statement has a rather general application. When an altitude of about 3,000 meters has been reached, with only a moderate pull and a good angle, experience has shown that still higher altitudes may generally be obtained by adding more kites and reeling out farther, without materially increasing the pull. This may be explained by the tendency of light winds to extend to very high altitudes. Furthermore, actual increase of velocity with elevation is offset by the diminishing air density.

The circumstance of kites flying at a low angle is often associated with a stratified condition of the air, manifested by a brisk shallow wind, on top of which the kites seem to float as though on a liquid surface, seemingly in a calm and all flying at about the same altitude. This condition may be met with in winds from any direction and except in easterly winds (for reasons explained

[2] Ordinarily the secondary kites are attached at more or less regular intervals from the head kite, e. g., 500, 1,200, 2,000 meters, etc. Thus, there is a possibility of weakening the kite wire by repeated wrappings of the "splice" or galvanized-iron wire at the same place.—W. R. G.

[3] A dynamometer on each kite reel indicates at all times the "pull" on the wire.—W. R. G.

later) requires the exercise of caution lest too many kites be launched and exposed to the danger of a rise into winds too strong for the capacity of the wire. The danger is proportional to the proximity of the lower wind to a westerly direction, being practically zero in easterly winds and at a maximum in winds between northwest and southwest. When kites rise above such a calm stratum they will ordinarily enter a westerly wind and will cause a pull at the reel that will be partially a resultant of the direction and amount of the pulls of the individual kites.

There is also indication that the less the winds change in direction with altitude the greater will be their average velocity, which is simply further evidence of the general greater strength of westerly winds.

Kites floating above a shallow wind, other than easterly, can generally be reeled up into higher winds aloft after four or five kites have been launched on a few thousand meters of wire. With easterly winds, however, the change in direction is often so abrupt, and of such angular magnitude in comparatively short intervals of altitude, that repeated reeling in will be useless. In such a case the final ascent of the leading kites into stronger upper winds can often be accomplished by exercising patience. When, after a few attempts, it becomes apparent that reeling in is futile, it will be necessary simply to await the automatic rising of the kites that sometimes follows a wide change in azimuth. This horizontal shifting of the kites is generally to the right and very slow and will not result in raising the kites until the upper portion of the wire is approximately in line with the observed drift of the higher clouds. The total change in angle from the surface wind to the direction of the highest kite may be as much as 200 degrees.

It will generally be found that the "floating" type of kite flight is associated with abrupt, though not necessarily large, changes in wind direction with altitude. Exceptions occur and may be explained from the evidence of the meteorograph records as due to other abrupt changes in the meteorological elements causing air stratification.

Veering of winds with altitude averages greater than backing, both in frequency and angle, and is characteristic of approaching LOWS and retreating HIGHS, although more pronounced in the former. Backing of winds, associated with retreating LOWS and approaching HIGHS, is a more gradual process and is sometimes preceded by veering in the lower levels.[4] From what has been said the amount of shifting in wind direction with altitude, being significant of the probable average velocity, has an important bearing on the number and size of kites that can safely or advantageously be used. The accuracy with which this disposition of the winds can be foreseen will depend largely on the care with which observations of cloud direction and velocity are made.

[4] For more detailed discussion of this subject see Bulletin of the Mount Weather Observatory, Vol. 6, part 4, p. 125 et seq., and Monthly Weather Review, January, 1918, pp. 20-21.— *W. R. G.*

Easterly winds as a rule occasion no anxiety to the observer from the standpoint of excessive pull unless complicated by heavy rapidly moving clouds. Deep east winds are nearly always light to some unknown limit; and when strong easterly winds occur they either diminish with altitude or are rather uniformly strong with altitude, in which case the number of kites to use is easily apparent. The condition of light easterly winds surmounted by strong easterly winds is probably rare. While in the case of kites swinging from lower easterly winds to upper westerlies a strong current from the latter direction may be encountered for reasons already given, the pull will likely not be excessive.

A few flights will convince the observer to what extent success in kite flying is measured by ability to anticipate conditions in altitude and changes with time. Considerations of pressure rank first in making deductions of probable upper-air conditions and should be judged somewhat as follows: the state of the barometer, whether rising, falling, or stationary, and whether above or below normal; the duration and magnitude of the rise or fall; and the probable geographic distribution of pressure.

Changes in the surface wind are inclined to be synchronous with changes in pressure and the velocities themselves proportional to the pressure gradient. This relation between surface pressure and wind is not so simple when applied to velocities aloft. It will often be found that surface winds alone fail as an index to the probable velocities aloft and that they should be considered in connection with the previous few hours' pressure record. For reasons that will be evident from what follows it will often be necessary to wait until the first kite has ascended a few hundred meters before coming to a final decision as to what conditions to expect.

A condition that is pronounced, and that repeats itself with great similitude, is that which accompanies a period of rising pressure when the latter is already above normal. During the period of rising pressure strong winds increasing with altitude seem to be the rule, while the least indication of flattening out on the barograph trace is almost certain to be followed by diminishing winds—near the ground first, and progressively later at higher altitudes. The depth to which the strong winds will extend varies as the magnitude of the HIGH, and in the case of shallow HIGHS it may be possible to break through the stratum of strong wind into weaker winds aloft, provided the winds near the surface are not severe enough to beat down the kites. While without the aid of weather maps it will not ordinarily be possible to estimate the magnitude of the approaching area of high pressure, a knowledge of these facts will nevertheless be helpful. If a flight has been started while the pressure is rising steadily and the pull soon reaches the limit of safety, it will sometimes be found profitable to apply the brake and wait, an hour or more if necessary, until the expected stable pressure, with its attendant abatement of winds, makes further reeling out possible. The higher the pressure the more likelihood there is that it will soon reach its crest.

After the pressure has become high and stationary, the winds will be light to moderate to some considerable altitude, their average strength depending on the magnitude of the HIGH and the position of its crest. The surface wind may then be too light to launch a kite until the pressure has begun its downward trend. Occasionally, though, a temporary interruption of the stationary pressure may strengthen the surface wind sufficiently to start a flight—a circumstance the observer should be on the alert to take advantage of.

If a flight has been started after a more or less continuous fall in pressure sets in, increasing winds may be expected during the progress of the flight. The velocity to which the winds will rise in any given time will depend not only on the rate of fall in pressure, but in a sense, also, inversely as the height of the barometer. In other words, it will generally be found that the greater the magnitude of the retreating HIGH the longer (in terms of hours) will the intensity of the on-coming LOW be delayed. On the other hand, a slowly moving HIGH, even though it be comparatively flat, appears effectively to delay the advance circulation of a following LOW. Shallow winds, above which it is difficult to raise the kites unless much lifting surface is used, are common in the rear of HIGHS.

If the barometer is low and stationary, the surface winds may be light, and under such circumstances one should resist the temptation to use large and many kites until the preceding fall in pressure has been looked into. If the fall has been slow and no very low level reached, this, together with the light surface winds, may be construed as indicating comparatively light winds to a great depth. If the barometer is quite low and the preceding fall has been rapid, a more or less sudden rise in velocity is probable at some altitude that may be as low as 200 meters above the ground.

If a flight is made during a period of rapidly falling pressure that is below the normal, the winds will no doubt be very strong from practically the ground up; in which case, if a flight is at all possible, it will naturally be limited to few kites. Ordinarily, strong winds do not preclude the possibility of a flight unless they attain gale force near the ground. Where the strength of the wind limits the number of kites to three or less, flights to nearly 3,000 meters above ground may be obtained by rapid reeling out, and without risk of increasing pull on the reel-in, owing to the beating down of the kites as soon as the reel is stopped. In such a case care should be taken not to reel out more wire than the kites can hold above the ground, bearing in mind the fact that the wire will fall as soon as reeling in commences.

When the barometer is low and rising, the winds are likely to be more uniform in direction and velocity with altitude, and less given to abrupt changes, than when the pressure is low and falling. Much the same precautions should be observed in either phase of low pressure, although in the case of rising pressure there is less probability of the pull increasing after the highest possible altitude has been attained, the supposition being that the winds have already reached their maximum. On the whole, it may be said that falling pressure presents more difficulties than rising pressure. Low barometer, owing to the complexities of cyclonic circulation, has more elements of danger than high barometer.

While the different conditions of pressure met with from day to day are of course endless, their relation to the probable velocities may be summed up as depending on the barometric tendency, and the position of the centers of high and low pressure areas. The latter qualifying circumstance will be the most uncertain to make deductions from in the absence of weather maps, but a good deal can be accomplished by careful observation and study. In particular should study be directed toward determining the probable direction of a nearby center of low pressure. When the direction of movement of a LOW coincides with the direction of the gradient winds (with respect to the surface isobars), there is evidence that winds at the various altitudes average strongest, other things being equal, and that when such a position is impending the rise in velocities will be most rapid. The trend of the isobars can be closely estimated from the surface winds, the barograph trace, and the aspect of the first kite launched after it is a few hundred meters high.

In estimating the probable direction of the centers of high and low pressure from the station at the beginning of a flight, the observer should amplify his knowledge of the general laws of surface circulation with observation of the wind direction a few hundred meters above the ground. Unless surface winds are quite strong and have blown from a certain direction for some time they do not give conclusive evidence of the direction of the pressure gradient, owing to the susceptibility of light winds to local topography and diurnal change in temperature. Judgment will therefore often have to be deferred until the behavior of the first kite has been observed.

With a little practice, conclusions concerning the pressure distribution can be arrived at agreeing quite closely with that subsequently shown on the weather map. This refers more particularly to the cold season, when pressure conditions and changes are sharply defined. With approaching warm weather the whole problem of analyzing pressure conditions becomes increasingly difficult, and one will often be at a loss to know what to expect. This has its compensations, however, in the comparative freedom from unsafe conditions (except such as are of a local nature) in summer weather.

The trend of the isobars can be approximated by considering the direction of the wind at that moderate altitude above the ground where surface friction is surmounted and to which the kites gradually veer. Abrupt changes in wind direction have causes other than surface friction. In LOWS and in the rear of HIGHS gradient winds will be found at only a few hundred meters above the ground. While their direction with reference to the isobars varies somewhat with the rate of move-

ment of the LOW or HIGH and their depth varies enormously in different quadrants, it is sufficient to know that the direction of these gradient winds is approximately parallel to the surface isobars, with low pressure on the left. Above these gradient directions the winds in a low will ordinarily veer or back to the higher levels in which the LOW seems to move, depending on whether the LOW is approaching or receding. In the front of a pronounced HIGH the winds will often back from the ground up, no veering being apparent at any level.

In comparing conditions in high and low latitudes it may be justifiable to liken them somewhat to conditions in winter and summer, respectively, and therefore to qualify most of the foregoing remarks in applying them to low latitudes in much the same manner as has already been done with respect to summer conditions. Perhaps all that has been said with respect to HIGHS will need revision for southern and southeastern States, where HIGHS are inclined to stagnate. With respect to LOWS, however, it is thought one needs to consider only their different average courses in those sections.

Low-lying dense clouds add to the perplexities of kite flying, as they are liable to be a menace in almost any condition of low pressure, in any wind direction, and at any season of the year. St. clouds, however, are characteristic as trouble breeders, and any indication of St.Cu. blending into St. should be reason for caution; and, conversely, St. breaking into St.Cu., should be considered encouraging. In warm weather dense St. are not necessarily dangerous unless they are moving rapidly and rain is falling or seems imminent. The combined effect of rain and wind often completely crushes one or two kites. It will sometimes tax the initiative of the observer when caught in such conditions to limit the danger to one or two kites and avoid excessive pull on the wire. If a flight is started during the prevalence of such conditions, reeling out and the launching of kites should proceed cautiously until the absence of any strong wind in the cloud layer is assured.

In the cold season of northern latitudes an additional danger attached to heavy clouds lies in the accumulations of ice or frost on the kites and wire in amounts that may be sufficient to cause them to fall in spite of fastest reeling in. This danger is present only when the surface temperature is in the neighborhood of freezing or somewhat below. When low clouds prevail with this state of temperature, a certain amount of ice will almost always form on the wire; but excessive deposits on wire and kites will occur only when the sky is overcast or nearly so and the circumstances favor a prolonged exposure to the clouds. The deposit is caused by the minute globules of subcooled water, sometimes having a temperature as low as $-10°$C., freezing on contact with the solid surfaces—a process that is facilitated by wind. There is very little danger of more than a light coating of ice on the wire when snow is falling freely, but moist snow with wind may cause an excessive pull in the same manner as rain with wind.

If, after rising above a strong surface wind, the kites float on top of or in the clouds, this fact will be indicated by the dynamometer. With freezing temperature, unless the kites can be thrown up higher by reeling in, accumulation of ice will proceed over a long approximately horizontal line of kites and wire and cause them gradually to settle down. It is probable that such a comparative calm is incidental to the upper surface of the clouds and that a successful lifting of the kites will free them and most of the wire from the influence of the clouds. If the dynamometer indicates that the kites are flying at a good angle, a condition of great cloud depth may be present, the possible consequence of which will be indicated only by a lowering in the angle of the wire and a lessening of whatever atmospheric electric potential might have previously been recorded. A normal potential will dwindle almost to nothing as the wire becomes increasingly bulky with ice or frost and lower in angle. Dynamometer readings can be relied upon only to indicate the approximate angle of the kites before they and the wire have had time to become heavily coated, after which the pull is inclined to be deceptive, owing to their increased weight enabling the kites to present more nearly a normal surface to the wind.

When in the judgment of the observer ice conditions seem imminent, it is good policy to reel out as fast as consistent with a good ascensional rate of the kites, thereby penetrating the cloud layer with minimum exposure thereto. A good rule to observe in any threatening cloud condition is to begin the final reeling in well on the safe side of 200 pounds in order to leave a margin of safety for any possible increase in pull later on.

The circumstance of ice incrustations on the wire, which have been observed as much as a half inch in diameter,[5] together with the fact that it is most pronounced when snow is not actually falling, would seem to indicate the absence of some final stage necessary for precipitation, when all the other essentials for condensation are present. An interesting commentary on this point is afforded by a flight made at Drexel in the early spring of 1917. Reeling in, necessitated by heavily ice-laden kites and wire, had proceeded only a few hundred meters when a flash of lightning or sudden overcharge ruined the entire length of wire out from the reel,[6] a considerable portion of the upper end having apparently been completely burnt. The significant fact is that notwithstanding the heavy deposit of ice on the wire and kites precipitation was delayed until about or shortly after the accident, which was soon followed by a vigorous thunderstorm, accompanied by sleet and soft snow.

As thunderstorms are so much a local phenomenon, no general rules can be laid down for detecting their approach. No precaution seems ordinarily of avail other than listening attentively for thunder on days when conditions seem to favor thunderstorm development and frequently breaking the electrostatic ground for evidence of

[5] M. W. R. Supplement No. 10 (Aerology No. 5), p. 5.
[6] M. W. R. Supplement No. 10 (Aerology No. 5), pp. 5-6.

"flash" discharges. By "flash" discharge is meant a momentary mounting of the potential that causes intermittent sparks at the ground gap, or sparks that may even jump the air space in the voltmeter and are synchronous with discharges of lightning in the vicinity. As such irregular charges may be an accompaniment of storms passing the station as well as of one approaching it, they are not in the majority of cases a warning of unsafe conditions. Lightning flashes on the horizon should be considered in connection with the observed drift at the probable altitude of such clouds as are visible. The probable course of the outlying storm may thus be arrived at.

A possible indication of thunderstorm development may be inferred from the strong vertical currents of great depth that are frequently evident in warm weather from the behavior of the kites. If associated with high surface humidity and increasing Cu. or St.Cu. clouds conditions are probably ripe for thunderstorm formation.

Flights have on a number of occasions been caught in thunderstorms, and while the resulting records were extremely interesting the danger of personal injury and damage to equipment is too great to justify other than unavoidable flights in such instances.

The continuity of daily flights will depend a great deal on the vigilance and energy of the station force, as on many days when comparative calm prevails a brief interval of breeze will be sufficient to carry the kites into steady sustaining winds aloft.

Although the average surface velocities are greater in daytime than at night, this fact, particularly in warm weather, has often the opposite significance in kite flying. This is explained by the fact that convection currents, even though they may cause a slight acceleration of surface movement, have a damping influence on the normal increase of wind velocity with altitude and are, moreover, a mechanical hindrance to successful launching of kites. As already mentioned, they have a tendency alternately to depress and elevate the kites, which in the case of secondary kites may be so prone to cause continual confusion of the kites, cords, and wire as to threaten their fall and necessitate reeling in. Flights should therefore be started early enough on summer mornings to assure a thousand meters or more in altitude before convection currents are well under way.

Sometimes on clear, quiet days, during which a flight has been impossible, the kites will readily go up about sunset, or when nocturnal cooling sets in. It completes the often observed paradox, just mentioned, of flying conditions and surface wind, as in such instances the station anemometer is very likely to record lower velocities than at any time during the day. A plausible explanation is that the sudden cessation of convection currents permits the normal tendency for horizontal air movement to come into play and that the intense radiation at that hour confines the stagnant air to those very lowest layers immediately above the ground. At Drexel this was frequently observed and taken advantage of, where it was, moreover, found to be somewhat peculiar to south winds.[7]

The foregoing paragraph illustrates one of the many causes that operate to mask the possibility of a flight from indications of the station anemometer. Notwithstanding that it requires at least 5 m.p.s. to balance a kite and several hundred meters of wire, velocities as low as 1.5 m.p.s. appearing on the register need be no discouragement to attempting a flight.

Much of the text of these notes is not directly related to practical kite flying but has been written rather with the idea of promoting the interest of the observer. While a profound knowledge of meteorology is not necessary to practical kite flying, it must be admitted that the greatest justification for upper-air investigations will come from those stations where the interest of the men is aroused in the results as well as in the performance of their work.

Experience in kite flying will be valuable in the measure that it develops not only prescience of danger, but confidence in action when doubtful conditions obtain. Overcautiousness may spoil or curtail many a flight that would otherwise have been safe and high. From what has been said it may be gathered that dangerous conditions for kite flying, apart from those that extend down to the ground, are exceptional; and that in the large percentage of cases, when ground conditions permit, a flight may be started with all assurance of safe return of the kites.

Break-aways may be divided into two classes—(*a*) accidental, and (*b*) those caused by overloading the capacity of the wire. The former may be largely prevented by attention to the condition of the wire, while the latter may be subdivided into a number of causes as follows:

1. Kites floating on top of a shallow wind, or flying at a low angle, and finally rising into strong wind aloft.
2. Wind increasing rapidly soon after beginning reeling in.
3. Too long exposure of kites to damp, fast-moving clouds.
4. In rare cases, kites being caught in a thunderstorm or sudden squall.

To these may be added the occasional risk of kites falling on account of accumulations of ice, and the unsteady effects of light winds or convection currents.

The prevention of trouble from all of these causes will, to a large extent, be under the control of the field force. Cause 2 will call for the greatest caution on the part of the observer in charge of the flight, but danger from this cause will generally be limited to those conditions remarked under low pressure (see p. 11), and probably in only exceptional cases then. An additional remark in this connection, based on but a few observations, is to the effect that there is some indication that a condition of rising winds, such as might be expected with the approach of a strong LOW is heralded by a high wind at some low or intermediate altitude within the usual range of kites, that subsequently spread vertically in both directions.

[7] See M. W. R. Supplement No. 8 (Aerology No. 4), p7. .

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, April, 1918.*

April 1, 1918.

Time.	Surface.					At different heights above sea.								Electric potential.	Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.			
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
8:03	953.3	9.8	34	s.	6.3	396	953.3	9.8	.....	34	4.12	s.	6.3	.....	Few St.Cu., w.
						500	941.5	9.7	.....	33	3.97	s.	8.4	.....	
						750	913.8	9.6	.....	32	3.82	ssw.	13.4	.....	
8:16	953.2	9.9	30	s.	7.6	841	903.5	9.5	0.07	31	3.68	ssw.	15.2	1,800	
						1,000	886.7	9.0	.....	33	3.79	ssw.	15.9	.....	
						1,250	860.2	8.3	.....	35	3.83	sw.	17.0	5,000	
						1,500	834.4	7.5	.....	38	3.94	sw.	18.0	8,000	
						1,750	809.7	6.7	.....	41	4.02	wsw.	19.1	.....	
8:50	953.1	13.1	30	s.	9.8	1,804	804.3	6.6	0.30	41	4.00	wsw.	19.3	.....	
						2,000	784.9	5.4	.....	41	3.68	wsw.	19.0	.....	
						2,250	755.8	3.9	.....	41	3.31	wsw.	18.5	9,300	
						2,500	737.8	2.3	.....	42	3.03	wsw.	18.1	.....	Few St.Cu., w.
						2,750	715.0	0.8	.....	42	2.72	wsw.	17.7	.....	
						3,000	693.2	−0.7	.....	42	2.42	wsw.	17.3	11,000	Cloudless.
9:51	952.7	15.0	31	ssw.	12.5	3,158	679.9	−1.7	0.70	42	2.23	wsw.	17.0	11,500	
						3,000	693.2	−0.4	.....	40	2.36	wsw.	17.4	.....	
						2,750	715.0	1.6	.....	37	2.54	wsw.	18.0	.....	
						2,500	737.3	3.6	.....	34	2.69	wsw.	18.6	.....	
10:22	952.5	17.2	31	wsw.	14.3	2,435	743.8	4.1	0.01	33	2.70	wsw.	18.8	8,800	
						2,250	755.6	4.1	.....	41	3.36	wsw.	17.7	.....	
						2,000	784.5	4.2	.....	52	4.29	wsw.	16.2	2,700	
						1,750	809.1	4.2	.....	63	5.20	wsw.	14.6	.....	Cloudless.
11:06	952.3	17.9	32	wsw.	11.2	1,714	812.8	4.2	0.87	64	5.28	wsw.	14.4	5,800	
						1,500	834.4	6.1	.....	60	5.65	wsw.	13.9	.....	Few St.Cu., wsw.
						1,250	860.2	8.2	.....	55	5.98	wsw.	13.3	660	
						1,000	886.7	10.4	.....	50	6.30	wsw.	12.8	.....	
11:38	952.3	18.9	31	wsw.	12.5	792	908.8	12.2	1.63	46	6.54	wsw.	12.3	0	
						750	913.8	12.9	.....	44	6.55	wsw.	12.2	.....	
						500	941.0	16.9	.....	35	6.74	wsw.	11.5	.....	
11:45	952.3	18.6	31	wsw.	11.2	396	952.3	18.6	.....	31	6.64	wsw.	11.2	.....	Few St.Cu., wsw.

April 2, 1918.

A. M.															
11:59	963.5	6.6	49	ne.	11.0	396	963.5	6.6	.....	49	4.78	ne.	11.0	.....	6/10 A.St., w.; 4/10 St.Cu., w.
						500	951.0	4.6	.....	49	4.16	ne.	14.1	.....	
P. M.															
12:08	963.4	5.8	48	ne.	7.4	658	932.7	1.5	1.95	48	3.27	ene.	18.7	0	8/10 A.St., w.: 2/10 St.Cu.
						750	922.0	1.9	.....	48	3.36	ene.	18.3	24,000	Light rain from 12:06 to 12:20 p. m.
						1,000	894.0	3.0	.....	48	3.64	e.	17.1	50,000	
						1,250	867.5	4.2	.....	48	3.96	ese.	15.9	.....	6/10 A.St., w.: 4/10 St.Cu., w.
						1,500	841.3	5.3	.....	48	4.28	se.	14.7	.....	Thunderstorm conditions prevailing.
12:40	963.2	5.6	44	ne.	11.0	1,634	827.0	5.9	−0.45	48	4.46	se.	14.1	50,000	
						1,750	815.5	4.6	.....	50	4.24	se.	12.5	.....	
12:47	963.2	5.4	44	ne.	12.4	1,887	801.3	3.0	0.94	54	4.09	se.	10.6	50,000	
						1,750	815.5	2.7	.....	53	3.93	se.	.....	6,000	
						1,500	841.3	2.2	.....	52	3.72	ese.	.....	.....	
						1,250	867.5	1.7	.....	50	3.46	e.	.....	.....	Rain began 1:09 p. m., turning into sleet and rain at 1:34 p. m. and continuing at end of flight.
						1,000	894.0	1.2	.....	49	3.26	ene.	.....	.....	
1:15	963.1	5.4	45	ne.	9.2	909	904.0	1.0	0.82	48	3.15	ene.	.....	50,000	Thunder from west at 1:18 p. m.
						750	922.0	2.3	.....	47	3.39	ene.	.....	.....	
						500	951.0	4.3	.....	46	3.82	ne.	.....	50,000	
1:44	963.1	5.2	46	ne.	11.0	396	963.1	5.2	.....	46	4.07	ne.	11.0	.....	10/10 A.St., w.

April 3, 1918.

A. M.															
8:51	973.9	−0.4	70	ne.	5.1	396	973.9	−0.4	.....	70	4.14	ne.	5.1	.....	10/10 St.Cu., ene.
						500	961.3	−1.2	.....	72	3.98	ne.	6.7	.....	
						750	932.0	−3.0	.....	76	3.61	ene.	10.7	.....	
9:00	974.0	−0.4	72	nne.	5.5	787	927.2	−3.5	0.79	77	3.51	ene.	11.3	0	
						1,000	903.0	−1.9	.....	72	3.76	ene.	10.3	5,400	
						1,250	875.4	−0.1	.....	66	4.00	ene.	9.0	.....	
9:19	974.2	−0.2	72	ne.	5.1	1,322	867.2	0.4	−0.73	64	4.03	ene.	8.7	.....	
						1,500	848.6	−0.3	.....	64	3.81	ene.	6.5	8,300	
						1,750	822.5	−1.4	.....	63	3.36	ene.	3.3	.....	Altitude of St.Cu. base about 1,700 m.
10:42	974.7	0.5	70	ne.	5.5	1,802	817.2	−1.6	0.55	63	3.37	ene.	2.7	.....	
						1,750	822.5	−1.2	.....	58	3.21	ene.	3.6	4,700	
10:57	974.7	0.6	72	ne.	5.1	1,522	846.4	0.3	−0.39	66	2.25	ene.	7.4	.....	
						1,500	848.6	0.2	.....	37	2.29	ene.	7.4	.....	
						1,250	875.4	−0.8	.....	50	2.86	ene.	7.6	7,200	
						1,000	903.0	−1.7	.....	63	3.34	ne.	7.8	5,500	
						750	932.0	−2.7	.....	76	3.71	ne.	8.0	.....	
11:26	974.5	0.8	69	ne.	6.4	732	934.3	−2.8	1.07	77	3.73	ne.	8.0	2,400	
						500	961.8	−0.3	.....	71	4.23	nne.	6.0	.....	
11:32	974.5	0.8	69	nne.	5.1	396	974.5	0.8	.....	69	4.46	nne.	5.1	.....	10/10 St. Cu., ene.

April 4, 1918.

A. M.															
7:34	979.3	0.0	60	ne.	4.0	396	979.3	0.0	.....	60	3.67	ne.	4.0	.....	5/10 Cl., w.
						500	966.5	−.4	.....	55	3.25	ne.	5.0	3,200	
						750	937.0	−1.4	.....	44	2.39	ene.	7.5	.....	
7:56	979.4	1.8	51	ene.	4.9	970	911.5	−2.2	0.38	34	1.73	e.	9.7	9,800	
						1,000	908.0	−2.1	.....	33	1.69	e.	9.4	.....	
						1,250	880.0	−1.4	.....	26	1.41	e.	7.1	.....	5/10 Cl., w.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, April, 1918*—Continued.

April 4, 1918—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
8:32	979.4	2.0	51	ene.	5.8	1,432	860.4	−0.8	−0.30	20	1.14	e.	5.4		
9:00	979.4	3.0	51	ene.	5.8	1,273	877.9	−0.8	0.00	16	0.91	e.	4.3	9,500	
						1,500	853.0	−1.2		19	1.05	e.	4.5	12,000	
						1,750	826.7	−1.6		23	1.23	e.	4.9	14,600	
						2,000	801.4	−2.0		27	1.40	e.	4.9		
						2,250	777.0	−2.4		31	1.55	e.	5.2		
						2,500	752.2	−2.8		35	1.69	e.	5.4		
9:52	979.4	4.6	47	e.	7.6	2,512	751.5	−2.8	0.17	35	1.69	e.	5.4	12,500	
						2,500	752.2	−2.8		36	1.74	e.	5.4		
						2,250	777.0	−2.3		47	2.37	e.	5.4		
						2,000	801.4	−1.8		58	3.05	e.	5.4		
10:03	979.4	5.0	44	e.	7.2	1,978	803.6	−1.8	0.28	59	3.10	e.	5.4		
						1,750	826.7	−1.2		45	2.49	e.	6.5	11,000	
						1,500	853.0	−0.5		30	1.76	e.	7.8		3/10 Ci.St., w.
10:28	979.3	6.1	41	e.	7.2	1,259	879.6	0.2	−0.46	16	0.99	e.	9.0	8,500	
						1,250	880.0	0.2		16	0.96	e.	9.0		
10:33	979.2	6.1	40	e.	7.6	1,019	908.2	−0.9	0.62	13	0.74	e.	7.8	7,800	
						1,000	908.0	−0.8		14	0.80	e.	7.7		
						750	937.0	0.8		32	2.07	e.	6.2		
10:51	979.1	6.6	39	e.	6.3	694	943.8	1.1	1.85	36	2.38	e.	5.9	3,000	
						500	966.5	4.7		37	3.16	e.	7.3		
10:58	979.1	6.6	37	e.	8.0	396	979.1	6.6		37	3.61	e.	8.0		3/10 Ci., w.

April 5, 1918.

A. M.															
8:27	972.3	3.2	51	e.	13.3	396	972.3	3.2		51	3.92	e.	13.3		10/10 St.Cu., sse.
						500	959.9	2.2		53	3.79	ese.	15.5		
8:31	972.3	3.2	49	ese.	10.6	723	933.7	0.3	0.95	58	3.62	sse.	20.3		
						750	930.7	0.3		58	3.62	sse.	20.2	755	
						1,000	902.1	0.8		57	3.69	sse.	18.9	5,000	
						1,250	874.5	1.3		57	3.82	sse.	17.6		
						1,500	847.7	1.8		56	3.90	sse.	16.4		
9:03	971.9	3.7	49	se.	10.6	1,732	823.3	2.2	−0.19	56	4.01	sse.	15.2	0	10/10 St.Cu., sse.
						1,750	821.9	2.1		56	3.98	sse.	15.2		Altitude of St.Cu. base about 1,950 m.
						2,000	796.7	1.2		61	4.06	sse.	15.6		
						2,250	772.7	0.3		66	4.12	sse.	15.9	14,800	
						2,500	748.9	−0.6		70	4.07	s.	16.2		
						2,750	726.0	−1.5		75	4.04	s.	16.5		
						3,000	703.6	−2.4		80	4.00	s.	16.9	22,500	
10:01	970.9	6.0	46	se.	12.4	3,180	687.1	−3.0	0.48	83	3.94	s.	17.1	23,600	
						3,000	703.6	−1.9		81	4.23	s.	18.0	21,000	
						2,750	726.0	−1.0		79	4.44	s.	18.8		
						2,500	748.9	1.1		74	4.90	s.	20.6	14,700	10/10 St.Cu., s.
						2,250	771.9	2.0		72	5.08	s.	21.4		
10:43	970.2	6.2	46	sse.	13.8	2,206	775.9	2.9	−0.36	70	5.27	s.	22.1	15,000	Altitude of St.Cu. base about 1,900 m.
						2,000	795.8	2.2		62	4.44	s.	22.7	14,200	
						1,750	820.8	1.3		53	3.56	s.	23.4		
11:04	969.8	6.0	47	sse.	11.5	1,671	828.5	1.0	0.67	50	3.28	s.	23.6		
						1,500	846.3	2.1		55	3.91	s.	21.1	1,900	
						1,250	872.7	3.8		62	4.97	s.	17.5		
11:19	969.6	6.2	46	sse.	12.0	1,132	885.7	4.6	−1.24	66	5.60	s.	15.4		
						1,000	900.0	3.0		59	4.47	sse.	15.9		
11:24	969.5	6.0	47	sse.	10.6	873	914.1	1.4	0.96	52	3.52	sse.	16.4	2,500	
						750	928.0	2.6		51	3.76	sse.	15.4		
						500	956.8	5.0		48	4.19	sse.	13.3		
11:37	969.3	6.0	47	sse.	12.4	396	969.3	6.0		47	4.39	sse.	12.4		10/10 St.Cu., s.

April 6, 1918.

A. M.															
9:45	962.1	5.1	92	sw.	5.4	396	962.1	5.1		92	8.09	sw.	5.4		2/10 Cu., sw.; 4/10 St., sw.
						500	949.6	4.7		84	7.17	sw.	7.4		
						750	921.0	3.7		64	5.09	wsw.	12.3		
9:59	962.1	6.9	80	wsw.	6.3	787	917.1	3.5	0.41	61	4.79	wsw.	13.0	2,000	Altitude of St. base about 8.50 m.
						1,000	893.4	2.8		54	4.03	wsw.	12.3		
						1,250	866.5	1.9		46	3.22	w.	11.5		
10:12	962.2	7.7	78	wsw.	4.5	1,275	863.8	1.8	0.35	45	3.13	w.	11.4	4,800	
						1,500	840.0	0.5		54	3.42	w.	12.0		
						1,750	814.0	− 1.0		64	3.60	w.	12.7		
10:35	962.3	8.0	71	wsw.	6.3	1,960	793.0	− 2.3	0.60	72	3.63	w.	13.3	7,700	
						2,000	789.0	− 2.5				w.	13.4		4/10 Cu., wsw.
						2,250	764.5	− 3.7				w.	14.0		
						2,500	740.5	− 4.9				w.	14.6	9,500	
						2,750	717.2	− 6.1				w.	15.2		
						3,000	694.3	− 7.3				wnw.	15.8	12,300	
						3,250	672.0	− 8.5				wnw.	16.5		
						3,500	651.0	− 9.7				wnw.	17.1	15,000	
						3,750	630.8	−10.9				wnw.	17.7		
						4,000	610.9	−12.1				wnw.	18.3		1/10 Cu., w.
11:32	962.3	9.6	59	wnw.	7.2	4,006	610.2	−12.1	0.48			wnw.	18.3	16,500	
						4,250	591.2	−13.9				wnw.	18.2		3/10 Cu., wnw.
						4,500	571.8	−15.8				wnw.	18.2		
P. M.															
12:16	962.1	11.5	47	wnw.	8.9	4,673	558.5	−17.1	0.65			wnw.	18.1	19,000	
						4,500	571.8	−16.1				wnw.	18.1		
						4,250	591.2	−14.8				wnw.	18.0	15,400	
						4,000	610.9	−13.4				wnw.	17.9		
						3,750	630.8	−12.0				wnw.	17.8		
						3,500	651.0	−10.7				wnw.	17.8		
						3,250	672.0	− 9.3				wnw.	17.7		
						3,000	694.3	− 7.9				wnw.	17.6		
12:57	962.1	11.0	44	wnw.	8.5	2,835	709.4	− 7.0	0.41			wnw.	17.6	10,000	

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, April, 1918*—Continued.

April 6, 1918—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
						2,750	717.2	− 6.7				wnw.	17.0		3/10 Cu., wnw.
						2,500	740.5	− 5.6				wnw.	15.4	9,000	
						2,250	764.5	− 4.6				nw.	13.8	9,500	
						2,000	789.0	− 3.6				nw.	12.1		
						1,750	814.0	− 2.5				nw.	10.5		2/10 Cu., nw.
1:45	962.4	11.2	42	wnw.	4.5	1,693	820.4	− 2.3	0.94	71	3.58	nw.	10.1	5,700	
						1,500	840.6	− 0.5		67	3.93	nw.	10.4		
						1,250	867.4	1.8		62	4.32	nw.	10.7		
						1,000	894.3	4.2		57	4.70	nw.	11.1	3,200	
2:10	962.5	12.2	42	nw.	9.4	796	917.1	6.1	1.52	53	4.99	nw.	11.4	1,470	
						750	922.0	6.8		52	5.14	nw.	10.5		
						500	950.4	10.6		45	5.75	nw.	5.9		
2:17	962.5	12.2	42	nw.	4.0	396	962.5	12.2		42	5.97	nw.	4.0		2/10 Cu., nw.

April 7, 1918.

A. M.															
6:44	974.8	2.0	64	wnw.	3.6	396	974.8	2.0		64	4.52	wnw.	3.6		Cloudless.
						500	962.0	1.5		61	4.15	wnw.	7.5		
						750	932.9	0.2		53	3.29	nw.	16.7		
6:47	974.9	2.0	64	wnw.	7.2	795	927.6	0.0	0.50	52	3.18	nw.	18.4		
7:07	975.0	2.2	64	wnw.	6.3	889	916.9	−1.5	1.59	47	2.53	nw.	17.3	2,500	
						1,000	904.1	−0.8		40	2.28	nw.	16.7		
7:16	975.1	2.3	64	nw.	6.3	1,206	881.5	0.4	−0.60	26	1.64	nw.	15.6	3,900	
						1,250	876.8	0.3		25	1.56	nw.	15.6		
						1,500	849.4	−0.2		21	1.26	nw.	15.6	5,200	
						1,750	823.2	−0.6		18	1.05	nw.	15.7		
						2,000	797.8	−1.1		14	0.78	nw.	15.7		
7:42	975.2	3.0	60	nw.	7.2	2,249	773.7	−1.6	0.19	10	0.54	nw.	15.7	8,800	
						2,500	749.7	−3.3		18	0.84	nw.	19.5	10,500	
						2,750	727.0	−5.0		27	1.08	wnw.	23.3	11,300	
						3,000	703.9	−6.7		35	1.21	wnw.	27.2	14,500	
8:35	975.9	4.5	51	nnw.	5.8	3,029	701.1	−6.9	0.61	36	1.23	wnw.	27.6		
						3,000	703.9	−6.7		37	1.28	wnw.	26.5		
						2,750	727.0	−5.4		47	1.82	wnw.	17.0	11,900	
9:33	976.7	5.7	48	nnw.	7.6	2,731	728.9	−5.3	0.58	48	1.88	wnw.	16.3		
						2,500	750.5	−4.0		42	1.84	wnw.	16.1	11,600	
						2,250	774.7	−2.5		31	1.54	nw.	15.9	9,200	
						2,000	799.6	−1.0		22	1.24	nw.	15.7		
10:16	977.1	6.4	46	nnw.	8.0	1,942	805.8	−0.7	−0.56	20	1.15	nw.	15.7		
						1,750	825.4	−1.8		20	1.05	nw.	14.3		
10:29	977.2	7.0	48	nnw.	8.0	1,517	850.2	−3.1	0.76	19	0.89	nw.	12.6	5,200	
						1,500	852.0	−3.0		20	0.95	nw.	12.6		
						1,250	879.4	−1.1		30	1.67	nw.	11.9	3,600	
						1,000	907.0	0.8		40	2.59	nw.	11.3		
10:51	977.3	7.1	43	nnw.	8.5	790	931.1	2.4	1.39	49	3.56	nw.	10.8	1,380	
						750	935.6	3.0		49	3.71	nw.	10.5		
						500	964.9	6.4		46	4.42	nnw.	8.8		
10:57	977.4	7.9	45	nnw.	8.0	396	977.4	7.9		45	4.79	nnw.	8.0		Cloudless.

April 8, 1918.

A. M.															
7:10	*988.5	−2.2	71	nne.	5.1	396	988.5	− 2.2		71	3.61	nne.	5.1		Cloudless.
						500	975.5	− 2.8		69	3.34	nne.	7.5		
7:14	988.5	−2.0	75	nne.	5.1	669	955.1	− 3.8	0.59	65	2.89	n.	11.4		
						750	945.8	− 3.0		57	2.71	n.	12.2		
7:30	988.5	−1.8	73	nne.	5.1	1,002	915.9	− 0.6	−0.96	33	1.92	n.	14.8	3,300	
						1,250	887.9	− 0.7		28	1.61	nnw.	11.6		
7:52	988.5	−1.5	68	nne.	5.1	1,472	863.6	− 0.7	0.02	23	1.32	nnw.	8.8	4,500	
						1,500	860.4	− 0.8		23	1.31	nnw.	8.8		Few Ci. near horizon.
						1,750	834.0	− 2.1		21	1.08	nnw.	8.5		
						2,000	808.0	− 3.4		19	0.87	nnw.	8.2	7,400	
						2,250	782.8	− 4.7		18	0.74	nnw.	7.9	10,000	
						2,500	758.5	− 6.0		16	0.59	nnw.	7.6		
8:38	988.9	−0.3	65	nne.	4.1	2,635	745.7	− 6.7	0.52	15	0.52	nnw.	7.4	10,000	2/10 Ci., wnw.
						2,750	735.0	− 7.3		14	0.46	nnw.	6.8	15,500	
						3,000	712.4	− 8.6		13	0.38	nw.	5.5	18,000	
						3,250	689.7	−10.0		11	0.29	nw.	4.1		
9:53	989.6	1.9	48	nne.	3.7	3,309	684.3	−10.3	0.55	11	0.28	nw.	3.8		
						3,250	689.7	−10.0		11	0.29	nw.	4.1		
						3,000	712.4	− 8.5		10	0.30	nw.	5.2		
						2,750	735.6	− 7.1		9	0.30	nw.	6.3	17,000	
						2,500	759.5	− 5.7		8	0.30	nw.	7.5	9,700	
11:53	989.2	4.0	46	nne.	5.1	2,384	770.6	− 5.0	0.41	8	0.32	nw.	8.0		
						2,250	783.8	− 4.5		8	0.34	nw.	7.6		
						2,000	808.9	− 3.4		9	0.41	nnw.	6.8	6,300	
						1,750	835.0	− 2.4		10	0.50	n.	6.0		
P. M.															
12:16	989.0	5.3	38	ne.	4.1	1,610	849.8	− 1.8	0.27	10	0.53	n.	5.6		
						1,500	861.8	− 1.5		11	0.59	n.	5.4		
						1,250	889.0	− 0.8		15	0.86	n.	4.8	4,500	
						1,000	917.0	− 0.2		18	1.08	nne.	4.2		
						750	946.0	0.5		22	1.29	nne.	3.7		
12:39	988.7	6.0	38	ne.	3.7	722	949.7	0.6	1.72	22	1.40	nne.	3.6		
						500	975.5	4.4		33	1.39	ne.	3.3		
12:47	988.7	6.2	38	ne.	3.2	396	988.7	6.2		38	3.60	ne.	3.2		Few Ci., wnw.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, April, 1918*—Continued.

April 9, 1918.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
7:38	988.7	1.6	67	sse.	5.7	396	988.7	1.6	.....	67	4.60	sse.	5.7	.....	Cloudless.
						500	975.8	1.4	.....	65	4.39	sse.	6.2	.....	Few Ci., nw.
7:49	988.8	2.2	68	sse.	6.2	724	949.3	1.1	0.15	62	4.10	se.	7.5	2,000	
						750	946.1	1.1	.....	61	4.04	se.	7.4	4,400	
						1,000	917.9	0.7	.....	53	3.41	se.	6.3	5,500	1/10 Ci., nw.
						1,250	890.0	0.4	.....	45	2.83	ese.	5.2	.....	2/10 Ci., nw.
						1,500	862.5	0.1	.....	37	2.28	ese.	4.1	.....	Partial solar halo, 22° radius, from
11:04	988.5	8.1	45	sse.	9.4	1,579	854.3	0.0	0.29	35	2.14	ese.	3.7	.....	9:58 to 10:40 a. m.
						1,500	862.5	0.4	.....	37	2.33	ese.	3.8	.....	
						1,250	890.0	1.5	.....	42	2.86	ese.	4.2	.....	
						1,000	917.9	2.7	.....	47	3.49	se.	4.6	4,200	
						750	946.1	3.8	.....	52	4.17	se.	5.0	.....	
11:25	988.3	8.4	43	sse.	6.6	710	951.1	4.0	1.40	53	4.31	se.	5.1	.....	2/10 Ci., nw.
						500	975.3	6.9	.....	46	4.58	sse.	6.6	.....	
11:34	988.2	8.4	43	sse.	7.4	396	988.2	8.4	.....	43	4.74	sse.	7.4	.....	

April 10, 1918.

A. M.															
7:30	982.5	2.0	58	sse.	6.3	396	982.5	2.0	.....	58	4.09	sse.	6.3	.....	2/10 Ci.St., nnw.
						500	969.8	2.0	.....	56	3.95	sse.	7.4	.....	
7:40	982.5	1.8	61	sse.	6.3	747	940.6	1.9	0.28	50	3.50	se.	10.0	2,000	
8:04	982.5	2.5	61	sse.	2.2	902	922.8	3.1	−0.77	33	2.52	se.	5.5	.....	
						1,000	911.4	2.8	.....	32	2.39	se.	5.2	5,500	
						1,250	883.6	2.1	.....	29	2.06	se.	4.4	8,200	2/10 Ci.St., nnw.
						1,500	856.5	1.4	.....	25	1.69	se.	3.6	.....	
						1,750	830.3	0.7	.....	22	1.41	se.	2.8	9,400	
						2,000	804.8	0.0	.....	19	1.16	se.	2.1	.....	
9:40	982.1	6.5	46	sse.	6.7	2,149	789.9	−0.4	0.34	17	1.00	se.	1.6	.....	
						2,000	804.8	0.4	.....	16	1.01	se.	2.0	6,000	
						1,750	830.3	0.8	.....	13	0.84	se.	2.8	.....	
						1,500	856.5	1.6	.....	11	0.75	se.	3.5	.....	4/10 Ci.St., nnw.
9:48	982.1	6.8	44	sse.	6.7	1,470	859.7	1.7	−0.42	11	0.76	se.	3.6	.....	
						1,250	883.6	1.4	.....	26	1.77	se.	4.5	3,200	
						1,000	911.4	−0.3	.....	44	2.62	sse.	5.5	.....	
10:21	981.9	7.7	46	sse.	5.4	994	912.1	−0.3	1.06	44	2.62	sse.	5.5	2,400	
						750	940.0	2.3	.....	50	3.60	sse.	6.8	.....	
10:31	981.7	8.0	46	sse.	5.4	683	947.8	3.0	1.74	52	3.94	sse.	7.1	1,500	
						500	969.0	6.2	.....	48	4.55	sse.	6.3	.....	
10:37	981.7	8.0	46	sse.	5.8	396	981.7	8.0	.....	46	4.94	sse.	5.8	.....	3/10 Ci.St., nnw.

April 11, 1918.

A. M.															
7:45	974.3	4.4	44	sse.	2.4	396	974.3	4.4	.....	44	3.68	sse.	2.4	.....	5/10 Ci., wnw.
						500	961.9	4.1	.....	43	3.36	sse.	4.1	.....	
7:58	974.3	5.1	42	sse.	4.0	680	940.9	3.7	0.25	41	3.26	sse.	7.0	1,240	
						750	933.0	3.6	.....	40	3.16	sse.	6.8	1,350	Partial solar halo, 22° radius, from
						1,000	904.9	3.1	.....	36	2.75	se.	6.1	.....	8:12 to 8:38 a. m.
						1,250	877.2	2.5	.....	32	2.34	se.	5.4	.....	
						1,500	850.8	2.0	.....	28	1.98	se.	4.7	.....	3/10 Ci., wnw.
						1,750	825.0	1.5	.....	24	1.63	ese.	4.0	.....	
9:41	974.3	9.0	34	se.	4.2	1,813	818.5	1.4	0.27	23	1.55	ese.	3.8	.....	
						1,750	825.0	1.6	.....	23	1.58	ese.	3.8	.....	
						1,500	850.8	2.4	.....	21	1.52	e.	4.0	.....	
						1,250	877.2	3.3	.....	19	1.47	e.	4.1	5,000	
10:01	974.3	9.4	31	sse.	4.0	1,238	878.9	3.3	0.49	19	1.47	e.	4.1	.....	
						1,000	904.9	4.5	.....	24	2.02	e.	4.4	0	
						750	933.0	5.7	.....	31	2.84	sse.	4.8	.....	
10:21	974.2	10.2	31	sse.	1.8	652	944.5	6.2	1.68	34	3.22	sse.	4.9	.....	
						500	961.9	8.8	.....	32	3.63	sse.	3.8	.....	
10:26	974.2	10.5	30	sse.	3.1	396	974.2	10.5	.....	30	3.81	sse.	3.1	.....	2/10 Ci., wnw.

April 12, 1918.

A. M.															
7:20	973.6	4.4	77	se.	5.1	396	973.6	4.4	.....	77	6.44	se.	5.1	.....	Partial solar halo, 22° radius, until
						500	960.7	4.8	.....	75	6.45	sse.	6.8	.....	7:52 a. m.; 8/10 Ci.St., w.
7:30	973.6	4.8	75	se.	4.6	747	932.6	5.7	−0.37	71	6.50	s.	10.7	1,700	8/10 Ci.St., w.; few A.Cu., w.
9:10	973.6	9.6	59	se.	6.4	941	911.2	6.0	−0.15	48	4.49	s.	5.2	.....	5/10 Ci.St., w.; few A.Cu., w.
						1,000	905.0	5.6	.....	48	4.37	s.	5.1	3,400	
						1,250	879.0	3.8	.....	47	3.77	s.	4.7	4,200	
						1,500	852.0	2.1	.....	46	3.27	s.	4.2	6,500	
						1,750	825.2	0.3	.....	44	2.75	s.	3.8	.....	
10:14	973.6	11.7	52	sse.	5.5	1,843	815.7	−0.3	0.70	44	2.62	s.	3.6	7,200	
10:30	973.6	12.9	49	sse.	5.1	1,981	802.2	2.1	−1.74	19	1.35	s.	1.2	4,700	
						2,000	800.0	1.9	.....	19	1.33	s.	1.2	.....	
10:39	973.6	13.8	47	sse.	6.0	2,187	781.9	0.0	0.74	16	0.98	ssw.	1.2	.....	
						2,000	800.0	0.8	.....	26	1.68	ssw.	2.3	.....	
						1,750	825.2	1.5	.....	34	2.32	s.	3.2	.....	
						1,500	851.0	3.1	.....	53	4.04	s.	5.2	4,300	
						1,250	877.9	3.8	.....	61	4.89	sse.	6.1	.....	
11:10	973.5	14.8	44	sse.	7.4	1,172	886.5	4.6	0.89	71	6.02	sse.	7.1	2,700	
						1,000	905.0	6.1	.....	66	6.22	sse.	7.7	.....	
						750	933.0	7.5	.....	62	6.43	sse.	8.2	.....	Brilliant solar halo, 22° radius, be-
11:22	973.4	14.0	44	sse.	7.4	690	939.7	8.9	1.74	58	6.61	sse.	8.8	810	gan 11:20 a. m. and continued at
						500	961.0	12.2	.....	49	6.96	sse.	7.2	.....	end of flight.
11:33	973.3	14.0	44	sse.	6.4	396	973.3	14.0	.....	44	7.03	sse.	6.4	.....	5/10 Ci.St., w.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, April, 1918*—Continued.

April 13, 1918.

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Electric potential.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
7:44	970.4	6.4	73	sse.	6.7	396	970.4	6.4	.....	73	7.02	sse.	6.7	.....	Cloudless.
						500	958.2	6.2	.....	73	6.92	sse.	11.2	.....	
7:52	970.3	7.0	73	sse.	7.2	622	944.5	6.0	0.18	71	6.64	sse.	16.4	0	
						750	929.6	6.7	.....	67	6.57	sse.	14.7	.....	
7:57	970.3	7.0	72	sse.	5.4	886	914.0	7.5	−0.57	62	6.43	sse.	12.8	.....	
						1,000	900.8	7.2	.....	61	6.20	sse.	11.3	3,900	
						1,250	873.9	6.7	.....	57	5.59	sse.	8.0	.....	
8:14	970.3	7.8	68	sse.	6.3	1,428	855.9	6.3	0.22	55	5.25	sse.	5.6	6,100	
						1,500	848.1	5.9	.....	56	5.20	sse.	5.4	7,500	
						1,750	823.0	4.6	.....	60	5.09	sse.	4.5	8,000	
						2,000	798.8	3.3	.....	63	4.88	se.	3.6	.....	
						2,250	774.7	1.9	.....	68	4.77	se.	2.8	.....	
9:56	970.3	13.0	49	sse.	8.5	2,466	753.9	0.8	0.54	70	4.53	se.	2.0	.....	
						2,250	774.7	2.0	.....	67	4.73	se.	2.6	.....	
						2,000	798.8	3.3	.....	63	4.88	se.	3.3	.....	
10:19	970.1	13.1	48	sse.	10.3	1,786	819.7	4.5	0.46	60	5.05	se.	3.9	.....	
						1,750	823.0	4.7	.....	60	5.12	se.	4.2	.....	
						1,500	848.1	5.8	.....	60	5.53	se.	6.3	3,300	
						1,250	873.9	7.0	.....	60	6.01	sse.	8.3	.....	
						1,000	900.8	8.1	.....	60	6.48	sse.	10.4	565	
10:55	969.7	14.4	43	sse.	10.3	858	917.6	8.8	1.21	60	6.80	sse.	11.6	0	
						750	929.6	10.1	.....	56	6.92	sse.	11.2	.....	
						500	957.5	13.1	.....	47	7.09	sse.	10.2	.....	
11:04	969.6	14.4	43	sse.	9.8	396	969.6	14.4	.....	43	7.05	sse.	9.8	.....	Cloudless.

April 14, 1918.

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Electric potential.	Remarks.
A. M.															
7:37	967.1	10.5	66	ese.	6.3	396	967.1	10.5	.....	66	8.38	ese.	6.3	.....	8/10 St.Cu., sse.
						500	955.0	9.9	.....	73	8.91	se.	9.2	.....	
7:45	967.1	10.7	67	ese.	6.3	715	930.7	8.8	0.53	86	9.74	sse.	15.3	0	
						750	926.5	8.6	.....	86	9.61	sse.	15.3	.....	
						1,000	898.7	7.5	.....	84	8.71	sse.	15.4	.....	
						1,250	871.8	6.3	.....	83	7.93	sse.	15.4	2,200	
						1,500	845.9	5.1	.....	82	7.21	s.	15.4	.....	
						1,750	820.7	3.9	.....	80	6.46	s.	15.5	.....	
8:05	967.2	10.7	65	se.	6.7	1,834	812.0	3.5	0.47	80	6.28	s.	15.5	.....	
						2,000	795.7	2.5	.....	82	5.99	s.	14.1	6,200	
						2,250	771.5	0.9	.....	84	5.48	s.	11.9	.....	
						2,500	747.7	−0.6	.....	87	5.05	sse.	9.8	9,300	
8:50	967.0	12.4	58	se.	7.2	2,744	725.1	−2.1	0.62	89	4.57	sse.	7.7	.....	
						2,750	724.7	−2.1	.....	89	4.57	sse.	7.7	.....	Altitude of St.Cu. base about 2,750 m.
						3,000	702.5	−3.3	.....	89	4.13	sse.	8.8	10,000	Altitude of St.Cu. base about 2,950 m m.
						3,250	680.5	−4.4	.....	90	3.80	sse.	9.9	11,000	10/10 St.Cu., sse.
9:52	966.9	13.9	56	sse.	8.9	3,389	668.5	−5.0	0.48	90	3.61	sse.	10.5	.....	
						3,250	680.5	−4.3	.....	90	3.83	sse.	11.2	9,500	
						3,000	702.5	−3.0	.....	91	4.32	sse.	12.4	.....	
						2,750	724.7	−1.8	.....	91	4.79	sse.	13.7	7,800	
						2,500	747.7	−0.5	.....	92	5.39	sse.	14.9	.....	
10:27	966.7	13.5	52	sse.	6.3	2,421	754.9	−0.1	0.53	92	5.58	sse.	15.3	.....	Altitude of St.Cu. base about 2,400 m.
						2,250	771.5	0.8	.....	87	5.63	sse.	15.5	.....	
						2,000	795.7	2.1	.....	80	5.69	sse.	15.7	8,200	
						1,750	820.7	3.4	.....	72	5.62	sse.	15.9	.....	
10:50	966.6	13.9	54	sse.	6.7	1,531	842.8	4.6	0.73	66	5.60	sse.	16.1	4,200	
						1,500	845.9	4.8	.....	66	5.68	sse.	16.0	.....	
						1,250	871.8	6.6	.....	64	6.24	sse.	14.9	2,000	
						1,000	898.7	8.4	.....	63	6.94	sse.	13.8	.....	
						750	926.5	10.3	.....	62	7.77	sse.	12.8	.....	9/10 St.Cu., sse.
11:28	966.4	14.7	52	sse.	8.0	663	936.1	10.9	1.61	61	7.95	sse.	12.4	0	
						500	954.0	13.5	.....	56	8.66	sse.	9.7	.....	
11:35	966.3	15.2	53	sse.	8.0	396	966.3	15.2	.....	53	9.15	sse.	8.0	.....	10/10 St.Cu., sse.

April 15, 1918.

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Electric potential.	Remarks.
A. M.															
8:54	958.4	11.0	89	se.	8.0	396	958.4	11.0	.....	89	11.09	se.	8.0	.....	10/10 St., se.
						500	946.5	10.1	.....	90	11.12	se.	11.1	.....	
						750	918.5	8.0	.....	91	9.76	se.	18.7	.....	
9:00	958.4	11.1	88	se.	8.0	864	905.8	7.0	0.85	92	9.22	se.	22.1	2,500	Altitude of St. base about 800 m.
						1,000	891.0	7.4	.....	85	8.76	se.	22.3	.....	
						1,250	864.5	8.2	.....	72	7.83	sse.	22.8	.....	
9:10	958.4	11.5	88	se.	8.5	1,362	852.9	8.6	−0.32	66	7.37	sse.	23.0	7,100	
						1,500	838.8	7.8	.....	69	7.30	sse.	22.0	.....	
						1,750	814.0	6.4	.....	75	7.21	sse.	20.2	.....	
						2,000	789.5	5.0	.....	82	7.15	s.	18.3	10,000	
						2,250	765.7	3.6	.....	88	6.96	s.	16.5	10,900	
9:44	958.4	11.4	87	se.	9.4	2,427	749.0	2.6	0.69	92	6.78	s.	15.2	.....	
						2,250	765.7	4.0	.....	84	6.83	s.	16.0	10,500	
						2,000	789.5	6.1	.....	74	6.97	s.	17.2	.....	
						1,750	814.0	8.1	.....	63	6.80	s.	18.4	.....	
10:56	958.1	12.9	83	se.	9.8	1,722	816.6	8.3	0.31	62	6.79	s.	18.5	.....	
						1,500	838.8	8.4	.....	70	7.71	s.	17.6	5,000	
						1,250	864.5	8.4	.....	78	8.60	sse.	16.6	.....	
						1,000	891.0	8.5	.....	87	9.66	se.	15.6	.....	5/10 A.St., 5/10 St., se.
11:20	958.0	13.4	79	se.	8.9	767	916.5	8.6	1.37	95	10.61	se.	14.6	1,300	Altitude of St. base about 900 m.
						750	918.5	8.8	.....	94	10.65	se.	14.3	.....	
						500	946.5	12.3	.....	83	11.88	se.	10.2	.....	
11:28	957.9	13.7	79	se.	8.5	396	958.3	13.7	.....	79	12.39	se.	8.5	.....	3/10 A.St., 7/10 St., se.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, April, 1918*—Continued.

April 16, 1918 (No. 1).

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
7:57	962.1	7.4	77	w.	10.3	396	962.1	7.7	.....	77	7.93	w.	10.3	.....	Cloudless.
						500	950.0	6.4	.....	78	7.50	w.	12.2	.....	
8:10	962.2	7.9	73	w.	10.3	753	921.1	3.1	1.20	81	6.18	wnw.	16.9	0	
						1,000	893.7	4.4	.....	63	5.27	wnw.	17.7	.....	
8:15	962.3	8.0	73	w.	9.8	1,171	875.0	5.3	−0.53	51	4.54	wnw.	18.3	.....	
						1,250	866.4	5.3	.....	47	4.19	wnw.	18.4	1,700	
						1,500	840.1	5.3	.....	36	3.21	wnw.	18.5	.....	
						1,750	815.0	5.2	.....	24	2.12	w.	18.7	.....	
8:34	962.5	8.5	70	wnw.	11.2	1,951	795.6	5.2	0.13	15	1.33	w.	18.8	3,000	
						2,000	791.0	4.8	.....	17	1.46	w.	18.8	.....	
						2,250	767.5	2.6	.....	23	1.84	w.	19.1	.....	
						2,500	744.0	0.5	.....	34	2.15	w.	19.3	5,700	
						2,750	721.0	−1.7	.....	42	2.23	w.	19.6	.....	
9:05	962.8	9.1	68	wnw.	10.3	2,773	718.8	−1.9	0.86	43	2.24	w.	19.6	7,400	
						3,000	698.9	−3.2	.....	43	2.01	w.	20.9	.....	
						3,250	677.2	−4.7	.....	44	1.81	w.	22.4	.....	
9:25	962.8	10.1	68	wnw.	10.7	3,352	668.5	−5.3	0.66	44	1.72	w.	23.0	8,000	
						3,250	677.2	−4.5	.....	44	1.84	w.	22.9	.....	
						3,000	698.9	−2.7	.....	43	2.10	w.	22.7	6,800	
						2,750	721.0	−0.8	.....	42	2.40	w.	22.5	6,000	
						2,500	744.0	1.0	.....	41	2.69	w.	22.3	.....	
10:14	962.9	11.2	63	nw.	9.8	2,328	700.2	2.3	0.22	41	2.96	w.	22.2	4,800	
						2,250	767.5	2.5	.....	41	3.00	w.	21.8	.....	
						2,000	791.8	3.0	.....	41	3.11	w.	20.4	4,000	
						1,750	816.3	3.6	.....	41	3.24	wnw.	19.0	.....	
						1,500	842.0	4.2	.....	41	3.38	wnw.	17.6	.....	
10:47	963.0	12.4	60	nw.	7.6	1,438	848.8	4.3	0.70	41	3.41	wnw.	17.3	2,200	
						1,250	868.7	5.6	.....	49	4.46	nw.	14.9	.....	
						1,000	895.3	7.4	.....	60	6.18	nw.	11.7	.....	
						750	923.0	9.1	.....	71	8.21	nnw.	8.6	.....	
11:02	963.1	12.6	59	nw.	9.4	730	926.5	9.3	0.96	72	8.44	nnw.	8.2	0	
						500	951.0	11.4	.....	61	8.22	nw.	9.0	.....	
11:10	963.2	12.4	56	nw.	9.4	396	963.2	12.4	.....	56	8.06	nw.	9.4	.....	Cloudless.

April 16, 1918 (No. 2).

A. M.															
11:59	963.5	14.4	53	wnw.	6.3	396	963.5	14.4	.....	53	8.69	wnw.	6.3	.....	Few St.Cu., wnw.
						500	951.5	12.8	.....	56	8.28	wnw.	6.9	.....	
P. M.															
12:11	963.5	14.0	53	wnw.	4.5	752	923.2	8.9	1.54	64	7.30	wnw.	9.2	0	
						1,000	895.7	7.1	.....	69	6.96	wnw.	10.6	1,500	
						1,250	869.1	5.2	.....	74	6.55	wnw.	12.0	.....	
						1,500	843.0	3.4	.....	79	6.16	wnw.	13.3	.....	
12:42	963.5	14.8	50	wnw.	7.2	1,548	838.2	3.0	0.74	80	6.06	wnw.	13.6	3,000	
12:47	963.5	14.7	50	wnw.	4.0	1,699	822.5	4.5	−3.06	40	3.37	wnw.	18.0	.....	Few Cl.St., wsw.; few St.Cu., wnw.
						1,750	817.3	4.2	.....	40	3.30	wnw.	18.1	.....	
						2,000	792.1	2.6	.....	42	3.10	wnw.	18.7	.....	
						2,250	768.4	1.0	.....	45	2.96	w.	19.4	.....	
						2,500	745.3	−0.5	.....	47	2.75	w.	20.0	.....	
12:59	963.5	14.5	50	wnw.	7.6	2,542	741.0	−0.8	0.63	47	2.68	w.	20.1	7,700	
						2,750	722.5	−2.1	.....	49	2.51	w.	20.8	.....	
						3,000	700.0	−3.7	.....	52	2.33	w.	21.6	9,300	
						3,250	678.0	−5.3	.....	55	2.15	wsw.	22.4	.....	
						3,500	656.8	−6.9	.....	57	1.94	wsw.	23.2	10,000	
						3,750	636.0	−8.4	.....	60	1.79	wsw.	24.0	.....	
1:45	963.2	15.6	46	wnw.	8.0	3,759	635.0	−8.5	0.62	60	1.78	wsw.	24.0	11,000	
						3,750	636.0	−8.4	.....	60	1.79	wsw.	24.0	.....	
						3,500	656.8	−6.9	.....	65	2.22	wsw.	23.4	.....	
						3,250	678.0	−5.4	.....	69	2.68	wsw.	22.8	.....	
2:10	963.0	15.9	44	wnw.	5.8	3,113	689.7	−4.6	0.74	72	2.99	wsw.	22.5	8,500	
						3,000	700.0	−3.8	.....	71	3.15	wsw.	21.8	.....	
						2,750	722.5	−1.9	.....	69	3.60	wsw.	20.4	.....	1/10 Cl.St., wsw.; few St.Cu., wnw
						2,500	745.3	0.0	.....	67	4.09	w.	18.9	6,100	
2:35	962.9	16.0	42	wnw.	5.4	2,346	759.5	1.1	0.92	66	4.37	w.	18.0	.....	
						2,250	768.4	2.0	.....	63	4.45	w.	17.5	.....	
						2,000	792.1	4.3	.....	54	4.49	w.	16.3	.....	
2:39	962.9	16.0	41	wnw.	5.4	1,975	795.0	4.5	−0.66	53	4.46	w.	16.2	.....	
						1,750	817.3	3.0	.....	54	4.09	w.	8.8	.....	
2:41	962.9	16.1	41	wnw.	5.4	1,734	819.1	2.9	0.69	54	4.07	w.	8.3	.....	
						1,500	843.0	4.5	.....	68	5.73	w.	6.5	1,300	
2:50	962.8	16.6	40	wnw.	5.8	1,431	850.3	5.0	0.99	72	6.28	w.	6.0	.....	
						1,250	869.1	6.8	.....	66	6.52	w.	6.2	.....	
						1,000	895.7	9.3	.....	57	6.68	wnw.	6.4	.....	
						750	922.9	11.8	.....	49	6.78	wnw.	6.6	0	
3:13	962.6	16.4	38	wnw.	5.8	666	938.2	12.6	1.33	46	6.71	wnw.	6.7	.....	
						500	950.0	14.8	.....	40	6.73	wnw.	6.1	.....	
3:19	962.5	16.2	37	wnw.	5.8	396	962.5	16.2	.....	37	6.82	wnw.	5.8	.....	3/10 Cl.St., wsw.; few St.Cu., wnw.

April 16, 1918 (No. 3).

P. M.															
4:03	961.8	16.8	36	wnw.	6.3	396	961.8	16.8	.....	36	6.89	wnw.	6.3	.....	4/10 Cl.St., wsw.
						500	950.0	15.6	.....	37	6.56	wnw.	5.7	.....	
4:14	961.8	16.4	39	wnw.	3.6	717	925.9	13.0	1.18	38	5.69	wnw.	4.6	0	6/10 Ci.St., wsw.; partial solar halo, 22° radius.
						750	922.0	12.7	.....	39	5.73	wnw.	4.6	.....	
						1,000	895.0	10.4	.....	45	5.67	wnw.	4.4	.....	8/10 Cl.St., wsw.; few St.Cu., wnw.
						1,250	868.6	8.0	.....	51	5.47	wnw.	4.2	.....	

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, April, 1918*—Continued.

April 14, 1918 (No. 3)—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
4:50	961.8	16.2	41	wnw.	5.4	1,360	857.0	7.0	0.93	54	5.41	wnw.	4.1	1,200	
						1,250	868.6	8.0		52	5.58	wnw.	3.9		
						1,000	895.0	10.3		49	6.14	wnw.	3.6		2/10 Cl.St., wsw.; 5/10 St.Cu., sw.
						750	922.0	12.7		45	6.61	wnw.	3.2		
5:25	961.9	16.1	43	wnw.	1.8	734	924.1	12.8	0.98	45	6.65	wnw.	3.2		
						500	950.0	15.1		44	7.55	wnw.	3.1		
5:36	962.0	16.1	43	wnw.	3.1	396	962.0	16.1		43	7.87	wnw.	3.1		7/10 St.Cu., sw.
April 17, 1918.															
A. M.															
8:39	958.2	7.7	62	wnw.	7.2	396	958.2	7.7		62	6.52	wnw.	7.2		3/10 Cl.St., ssw.; 3/10 St.Cu., w.
						500	946.0	6.9		62	6.17	w.	8.0		
						750	917.7	4.9		61	5.28	wsw.	10.1		2/10 Cl.St., ssw.; 1/10 St.Cu., wsw.
8:51	958.1	8.2	58	wnw.	8.0	776	914.7	4.3	0.79	61	5.07	wsw.	10.3	1,205	
						1,000	889.6	3.0		62	4.70	wsw.	9.3		
						1,250	862.7	1.5		63	4.29	sw.	8.1	2,300	
						1,500	836.0	0.0		64	3.91	sw.	7.0		Few Cl.St., ssw.
9:30	957.7	9.1	57	wnw.	6.3	1,557	830.2	− 0.3	0.59	64	3.81	sw.	6.7		
						1,750	809.9	− 1.7		60	3.18	sw.	6.8	3,200	Cloudless.
						2,000	784.4	− 3.5		54	2.46	sw.	7.0		
						2,250	760.0	− 5.3		49	1.92	wsw.	7.2	5,000	
						2,500	736.7	− 7.2		43	1.43	wsw.	7.4	6,700	
						2,750	714.0	− 9.0		37	1.05	wsw.	7.6		
10:22	957.1	10.8	46	wnw.	6.7	2,765	712.2	− 9.1	0.73	37	1.04	wsw.	7.6		
						3,000	691.2	−10.9		38	0.91	wsw.	8.8		
						3,250	669.0	−12.7		40	0.82	wsw.	10.1		
						3,500	647.0	−14.6		41	0.70	w.	11.5	9,000	
						3,750	625.8	−16.5		43	0.61	w.	12.8		
						4,000	605.8	−18.3		44	0.53	w.	14.1		1/10 Cu., w.
11:10	956.7	11.5	40	wnw.	8.5	4,158	592.9	−19.5	0.75	45	0.49	w.	14.9	11,000	
						4,250	585.8	−20.2		45	0.45	w.	15.0		
						4,500	566.3	−21.9		46	0.39	w.	15.4		
						4,750	547.7	−23.7		48	0.34	w.	15.8	15,000	
11:49	956.5	12.5	35	wnw.	10.3	4,845	540.4	−24.4	0.77	48	0.32	w.	15.9		
						4,750	547.7	−23.6		49	0.35	w.	15.5		
						4,500	566.3	−21.6		51	0.45	w.	14.6		
						4,250	585.8	−19.5		53	0.57	w.	13.6		
						4,000	605.8	−17.4		55	0.73	w.	12.6	11,500	
						3,750	625.8	−15.4		57	0.91	w.	11.6		Altitude of Cu. base about 2,500 m.
P. M.															
12:30	956.2	12.0	40	w.	11.2	3,532	644.3	−13.6	0.58	59	1.11	w.	10.8		
						3,500	647.0	−13.4		60	1.15	w.	10.8		7/10 Cu., w.
						3,250	669.0	−12.0		65	1.41	w.	10.9		
						3,000	691.2	−10.5		70	1.74	w.	11.0	8,600	
						2,750	714.0	− 9.1		75	2.11	w.	11.1		
						2,500	736.7	− 7.7		80	2.54	w.	11.2		Altitude of Cu. base about 2,450 m.
1:04	956.0	12.1	39	w.	8.0	2,264	758.7	− 6.3	0.97	85	3.05	w.	11.3	5,800	
						2,250	760.0	− 6.2		85	3.08	w.	11.3		
						2,000	784.4	− 3.7		79	3.54	w.	11.0		Altitude of Cu. base about 2,250 m.
						1,750	809.9	− 1.3		73	4.00	w.	10.6		
						1,500	836.0	1.1		67	4.44	w.	10.3	2,000	Few Cl., w.; 7/10 Cu., w.
						1,250	862.7	3.6		61	4.83	w.	10.0	0	Rain began 1:35 p. m. Continued at end of flight.
						1,000	889.0	6.0		55	5.14	w.	9.7		
						750	916.3	8.4		49	5.40	w.	9.3		
1:50	956.0	12.9	40	wnw.	10.3	732	918.3	8.6	1.10	49	5.47	w.	9.3		
						500	943.7	11.2		43	5.72	nw.	10.7		
1:55	956.0	12.2	41	nw.	11.2	396	956.0	12.2		41	5.83	nw.	11.2		6/10 Cu., w.; 4/10 Cu.Nb., w. Weather threatening. Thunder s. of station at 2:15 p. m.
April 18, 1918.															
P. M.															
3:14	967.2	12.8	42	n.	3.2	396	967.2	12.8		42	6.21	n.	3.2		9/10 Cu., wsw.
						500	955.4	11.0		46	6.04	n.	4.4		
5:03	967.6	12.6	43	nne.	4.1	604	943.7	9.3	1.68	49	5.74	nne.	5.6	0	5/10 St.Cu., wnw.
						750	928.2	8.0		53	5.69	nne.	5.2		
						1,000	900.4	5.8		61	5.62	nne.	4.6		
						1,250	873.0	3.5		69	5.42	nne.	4.0		
5:38	968.2	12.4	45	nne.	3.7	1,352	862.0	2.6	0.87	72	5.31	nne.	3.7		
						1,250	873.0	3.5		70	5.50	nne.	3.6		
						1,000	900.4	6.5		65	6.29	nne.	3.5		
						750	928.2	7.6		60	6.26	nne.	3.4		
6:31	968.9	11.4	49	nne.	3.7	646	940.1	8.5	1.08	58	6.44	nne.	3.3	0	
						500	956.8	10.1		54	6.67	nne.	3.5		
6:40	969.0	11.2	52	nne.	3.7	396	969.0	11.2		52	6.92	nne.	3.7		5/10 St.Cu., wsw.
April 19, 1918.															
A. M.															
8:36	973.5	4.5	81	ne.	10.3	396	973.5	4.5		81	6.82	ne.	10.3		10/10 St., ene.
						500	955.8	3.0		84	6.37	ne.	10.5		Altitude of St. base about 800 m.
8:46	973.5	4.2	82	e.	8.5	711	936.2	−0.1	1.46	89	5.39	ene.	10.8	1,010	
						750	931.5	−0.2		89	5.35	ene.	11.4		
8:53	973.6	4.2	82	e.	8.0	882	916.6	−0.7	0.35	88	5.07	ene.	13.6		
						1,000	903.0	−0.1		83	5.03	ene.	13.8		
8:57	973.6	4.2	82	e.	10.3	1,039	898.8	0.1	−0.51	82	5.04	ene.	13.8	2,400	

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, April, 1918*—Continued.

April 19, 1918—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*volts.*	
						1,250	875.0	−1.1		83	4.62	ene.	12.1	2,300	
						1,500	847.8	−2.6		85	4.18	ene.	10.0		
						1,750	821.4	−4.0		86	3.76	ene.	8.0		
						2,000	796.2	−5.5		88	3.38	ene.	5.9		
9:35	974.0	4.0	80	e.	9.4	2,162	780.1	−6.4	0.58	89	3.17	ene.	4.6	3,700	
						2,250	771.6	−6.6		89	3.12	ene.	5.2	6,100	
						2,500	747.9	−7.0		88	2.97	ene.	6.7	8,600	Altitude of St.Cu. base about 750 m.
10:36	974.5	4.0	79	e.	8.0	2,737	725.3	−7.5	0.28	88	2.84	ene.	8.2		
						2,500	747.9	−6.6		89	3.12	ene.	7.4		
						2,250	772.5	−5.7		90	3.40	ene.	6.7		
						2,000	797.1	−4.8		91	3.71	ene.	5.9		
10:50	974.6	4.2	81	e.	9.8	1,948	802.1	−4.6	0.31	91	3.78	ene.	5.7	3,200	
						1,750	822.5	−4.0		91	3.98	ene.	7.5		Sprinkling rain, began 10:54 a. m.
						1,500	849.0	−3.2		90	4.21	ene.	9.8	3,800	Continued at end of flight.
						1,250	876.5	−2.5		89	4.41	ene.	12.1		
11:22	974.7	4.0	88	e.	7.2	1,033	900.5	−1.8	0.47	88	4.63	ene.	14.1	2,000	
						1,000	904.1	−1.6		88	4.71	ene.	13.6		
						750	933.0	−0.5		89	5.22	ene.	10.2		
11:35	974.7	4.0	88	e.	7.6	691	939.8	−0.2	1.42	89	5.35	ene.	9.4	0	
						500	957.0	2.5		87	6.36	e.	10.2		
11:41	974.7	4.0	86	e.	10.7	396	974.7	4.0		86	6.99	e.	10.7		10/10 St., ene.

April 20, 1918.

A. M.															
9:44	973.4	2.3	66	ne.	13.4	396	973.4	2.3		66	4.76	ne.	13.4		10/10 St., ne.
						500	960.8	1.3		61	4.09	nne.	12.5		
9:54	973.3	2.6	69	ne.	13.9	735	933.1	−0.8	0.91	82	4.68	n.	10.5	1,105	
						750	931.1	−0.9		82	4.65	n.	10.6		Snow (dry) from 11:23 a. m. to 12:38 p. m.
						1,000	902.1	−2.9		83	3.98	nne.	11.5		
						1,250	874.2	−4.9		84	3.40	ne.	12.4	4,800	
10:12	973.2	2.7	64	ne.	11.6	1,266	872.7	−5.0	0.79	84	3.37	ne.	12.5		
						1,500	847.0	−3.8		52	2.31	nne.	11.7		
10:22	973.0	2.7	62	nne.	11.6	1,716	824.1	−2.8	−0.49	23	1.11	nne.	11.0	10,200	
						1,750	820.4	−3.1		23	1.08	nne.	11.1		
						2,000	795.0	−5.1		27	1.07	nne.	12.2		
10:34	972.9	2.8	61	nne.	11.2	2,081	786.7	−5.8	0.82	28	1.05	nne.	12.5		
10:41	972.8	2.8	63	nne.	11.6	2,234	771.5	−3.0	−1.83	79	3.75	ne.	11.6	10,000	Altitude of St. base about 2,300 m.
						2,250	770.0	−3.1		79	3.72	ne.	11.5		
						2,500	746.0	−4.5		85	3.31	ne.	10.4	10,500	
						2,750	722.5	−5.9		91	3.38	ne.	9.2	19,500	
11:42	972.4	1.6	77	ne.	11.2	2,776	720.0	−6.0	0.54	92	3.39	ne.	9.1		
						2,750	722.5	−5.9		92	3.41	ne.	9.2	(*)	
						2,500	746.0	−4.5		92	3.85	ne.	9.9		* More than 50,000 volts.
						2,250	770.0	−3.2		92	4.31	ne.	10.6	20,000	
P. M.															
12:33	971.7	3.3	58	nne.	12.5	2,040	790.1	−2.1	−1.26	92	4.72	ne.	11.2	40,000	
						2,000	794.2	−2.6		91	4.48	ne.	11.7		
						1,750	819.4	−5.8		84	3.15	ne.	14.5		
12:41	971.6	3.4	58	ne.	13.4	1,739	820.7	−5.9	0.69	84	3.12	ne.	14.6	4,600	Altitude of St. base about 1,750 m.
						1,500	845.5	−4.3		78	3.32	ne.	13.9		
						1,250	872.8	−2.5		73	3.62	nne.	13.1		
						1,000	900.8	−0.8		67	3.83	nne.	12.3	3,000	
						750	929.4	0.9		61	3.98	n.	11.5		
1:18	971.0	4.7	52	n.	9.4	703	934.9	1.2	1.07	60	4.00	n.	11.4	0	
						500	958.5	3.4		54	4.21	nne.	10.7		
1:25	970.9	4.5	51	ne.	10.3	396	970.9	4.5		51	4.29	ne.	10.3		10/10 St., ne.; light snow began at 1:25 p. m.

April 21, 1918.

A. M.															
7:22	960.8	4.0	62	wnw.	4.6	396	960.8	4.0		62	5.04	wnw.	4.6		10/10 St. Cu., n.
						500	948.7	4.6		51	4.32	nw.	7.4		
7:32	960.8	4.2	62	wnw.	4.6	711	924.3	5.7	−0.54	30	2.75	nnw.	13.2	0	
						750	920.0	5.4		31	2.78	nnw.	13.2		
						1,000	892.0	3.3		34	2.63	nnw.	12.8	3,000	
						1,250	864.9	1.2		38	2.53	nnw.	12.5		
7:55	960.8	5.0	62	wnw.	4.6	1,505	838.0	−1.0	0.84	42	2.36	nnw.	12.2	5,700	
						1,750	812.8	−3.2		45	2.11	n.	12.4		
8:05	960.8	5.2	61	wnw.	4.1	1,820	805.4	−3.8	0.89	46	2.04	n.	12.4		
						2,000	787.4	−2.3		33	1.66	n.	14.5		
8:09	960.7	5.3	61	wnw.	4.1	2,021	785.1	−2.1	−0.85	31	1.59	n.	14.7		
						2,250	762.9	−3.2		31	1.45	n.	14.4	12,000	
						2,500	738.8	−4.5		31	1.30	n.	14.1		
8:29	960.6	5.8	55	wnw.	3.7	2,707	720.0	−5.6	0.51	31	1.18	n.	13.8	14,000	
						2,750	716.0	−4.4		64	2.70	n.	14.3		Altitude of St.Cu. base about 3,000 m.
8:42	960.5	6.4	55	wnw.	3.7	2,782	713.4	−3.5	−0.28	88	4.01	n.	14.6		
						3,000	694.0	−4.8		90	3.67	nnw.	13.9		
						3,250	672.9	−6.4		92	3.28	nw.	11.0		
9:08	960.4	8.2	47	nw.	4.6	3,301	668.1	−6.7	0.56	92	3.19	nw.	10.6	17,600	
						3,250	672.9	−6.4		89	3.17	nw.	10.9		
						3,000	694.0	−5.2		73	2.88	nnw.	11.5		
						2,750	716.0	−3.9		57	2.51	nnw.	14.0	11,000	
						2,500	738.8	−2.7		42	2.05	n.	15.5		10/10 St.Cu., w.
9:51	960.4	9.3	36	nnw.	4.1	2,407	748.2	−2.2	−0.38	36	1.83	n.	16.1		
						2,250	762.9	−2.8		28	1.36	n.	15.1	6,100	
10:04	960.4	9.9	35	nnw.	5.1	2,147	773.3	−3.2	0.71	22	1.03	n.	14.5		
						2,000	787.4	−2.2		24	1.22	n.	14.0		
						1,750	812.8	−0.4		27	1.60	n.	13.2		
						1,500	838.7	1.4		30	2.03	n.	12.4		

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, April, 1918*—Continued.

April 21, 1918—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
						1,250	864.9	3.2	.....	33	2.54	nnw.	11.6	.....	
						1,000	892.0	5.0	.....	36	3.14	nnw.	10.7	1,200	
						750	920.0	6.8	.....	39	3.85	nnw.	9.9	.....	
10:45	960.2	10.4	33	n.	3.7	743	920.7	6.8	1.07	39	3.85	nnw.	9.9	0	
						500	948.0	9.4	.....	35	4.13	n.	5.6	.....	
10:51	960.1	10.5	34	n.	3.7	396	960.1	10.5	.....	34	4.32	n.	3.7	.....	10/10 St.Cu., n.

April 22, 1918.

A. M.															
7:12	964.9	5.5	61	nnw.	4.6	396	964.9	5.5	.....	61	5.51	nnw.	4.6	.....	8/10 Cl.St., w.
						500	952.5	4.7	.....	61	5.21	nnw.	7.1	.....	
7:22	964.9	5.6	63	n.	4.1	723	926.9	3.0	0.76	61	4.62	n.	12.5	0	
						750	924.1	2.9	.....	61	4.59	n.	12.6	.....	
						1,000	896.7	1.8	.....	57	3.97	n.	13.6	.....	
						1,250	869.9	0.8	.....	53	3.43	nnw.	14.5	.....	
						1,500	843.3	− 0.3	.....	49	2.92	nnw.	15.5	.....	
						1,750	817.0	− 1.3	.....	45	2.47	nw.	16.4	.....	9/10 Cl.St., w.
7:47	965.1	6.1	57	nnw.	3.2	1,978	792.8	− 2.3	0.42	42	2.12	nw.	17.3	2,500	
						2,000	791.2	− 2.2	.....	42	2.14	nw.	17.2	.....	
7:50	965.1	6.4	56	n.	3.2	2,099	781.0	− 1.6	−0.58	42	2.25	wnw.	16.9	.....	Partial solar halo, 22° radius, from 7:58 to 8:25 a. m.
						2,250	766.0	− 2.4	.....	46	2.30	wnw.	16.8	.....	
						2,500	742.0	− 3.7	.....	52	2.33	wnw.	16.8	4,400	
						2,750	719.0	− 5.0	.....	58	2.33	wnw.	16.7	.....	3/10 Cl.St., w.; 7/10 A.St., w.
						3,000	696.6	− 6.3	.....	64	2.30	w.	16.6	5,000	
						3,250	675.0	− 7.5	.....	71	2.29	w.	16.5	.....	Altitude of A.St. base about 3,700 m.
						3,500	654.0	− 8.8	.....	77	2.23	w.	16.4	7,500	
						3,750	633.7	−10.1	.....	83	2.13	w.	16.3	.....	Altitude of A.St. base about 3,400 m.
8:52	966.1	7.8	49	nnw.	2.8	3,841	626.4	−10.5	0.51	85	2.11	w.	16.3	9,800	
						4,000	613.6	−11.4	.....	85	1.95	w.	17.2	.....	3/10 Cl.St., w.; 7/10 A.St., w.
						4,250	593.8	−12.7	.....	86	1.75	w.	18.7	.....	
						4,500	574.3	−14.1	.....	87	1.56	wsw.	20.2	.....	
						4,750	555.9	−15.4	.....	88	1.40	wsw.	21.6	.....	
9:28	966.2	8.7	47	nnw.	2.8	4,799	552.3	−15.7	0.54	88	1.36	wsw.	21.9	14,500	
						5,000	537.5	−17.2	.....	85	1.14	wsw.	21.6	.....	
						5,250	519.3	−19.2	.....	81	0.90	wsw.	21.3	.....	
9:52	966.2	9.1	49	nw.	3.7	5,306	515.6	−19.6	0.63	80	0.86	wsw.	21.2	.....	
						5,250	519.3	−19.3	.....	79	0.87	wsw.	21.1	.....	
						5,000	537.5	−18.1	.....	76	0.93	wsw.	20.8	.....	
						4,750	555.9	−16.9	.....	73	1.01	w.	20.5	.....	
						4,500	574.3	−15.7	.....	71	1.10	w.	20.2	.....	
						4,250	593.8	−14.5	.....	68	1.18	w.	19.8	.....	
						4,000	613.6	−13.3	.....	65	1.25	w.	19.5	.....	
						3,750	633.7	−12.1	.....	62	1.33	w.	19.2	.....	
						3,500	654.0	−10.9	.....	59	1.41	wnw.	18.8	.....	
						3,250	675.0	− 9.7	.....	56	1.50	wnw.	18.5	.....	
						3,000	696.6	− 8.5	.....	53	1.57	wnw.	18.2	.....	
						2,750	719.0	− 7.3	.....	50	1.64	wnw.	17.9	.....	
						2,500	742.0	− 6.1	.....	47	1.72	nw.	17.5	.....	
						2,250	766.5	− 4.9	.....	44	1.78	nw.	17.2	.....	
10:12	966.3	8.6	48	nw.	3.2	2,072	784.3	− 4.0	0.43	42	1.84	nw.	17.0	.....	
						2,000	791.5	− 3.7	.....	43	1.93	nw.	16.6	.....	
						1,750	817.0	− 2.6	.....	46	2.26	nw.	15.1	.....	
						1,500	843.3	− 1.5	.....	49	2.64	nw.	13.7	.....	
						1,250	869.9	− 0.4	.....	52	3.07	nw.	12.2	.....	
10:20	966.3	8.6	48	nw.	3.2	1,216	873.7	− 0.3	1.08	52	3.10	nw.	12.0	.....	
						1,000	897.1	2.0	.....	51	3.60	nw.	9.6	.....	
						750	925.3	4.8	.....	50	4.30	nw.	6.8	.....	2/10 Ci., w.
						500	954.1	7.5	.....	49	5.08	nw.	4.0	.....	8/10 A.St., w.
10:25	966.3	8.6	48	nw.	2.8	396	966.3	8.6	.....	48	5.36	nw.	2.8	.....	No. 40 collapsed and all kites fell in the field.

April 23, 1918.

P. M.															
12:34	968.6	9.2	34	ne.	4.9	396	968.6	9.2	.....	34	4.96	ne.	4.9	.....	10/10 A.St., w.; few Cu., nw.
						500	956.7	7.8	.....	36	3.81	nne.	6.2	.....	
12:45	968.6	9.0	34	nne.	5.8	706	932.8	5.0	1.35	41	3.58	n.	8.9	0	
						750	927.8	4.6	.....	42	3.56	n.	8.6	.....	
						1,000	899.2	2.1	.....	45	3.20	nne.	6.7	330	10/10 A.St., w.
						1,250	871.9	−0.4	.....	49	2.90	ne.	4.9	0	
2:21	968.9	9.2	38	nne.	3.6	1,359	860.4	−1.5	1.00	51	2.75	ne.	4.1	.....	
						1,500	845.5	−2.2	.....	49	2.49	ne.	4.3	.....	
						1,750	819.0	−3.4	.....	47	2.16	ne.	4.7	.....	
3:08	968.9	9.2	38	nne.	3.6	1,884	805.3	−4.1	0.50	45	1.95	ne.	4.9	.....	
						2,000	793.4	−5.1	.....	47	1.87	ne.	4.7	0	
						2,250	768.7	−7.3	.....	50	1.64	nne.	4.2	.....	
						2,500	744.3	−9.5	.....	54	1.46	n.	3.7	.....	
3:16	969.0	9.2	36	nne.	3.6	2,529	741.6	−9.8	0.84	54	1.43	n.	3.6	0	
						2,500	744.3	−9.6	.....	54	1.45	n.	3.6	.....	
						2,250	768.7	−7.6	.....	51	1.64	n.	3.3	.....	
						2,000	793.4	−5.6	.....	49	1.87	n.	3.0	.....	
						1,750	819.0	−3.6	.....	47	2.12	n.	2.7	.....	
3:22	969.0	9.1	36	nne.	3.1	1,672	827.5	−3.0	0.79	46	2.18	n.	2.6	0	
						1,500	845.5	−1.6	.....	43	2.30	n.	3.1	.....	
						1,250	872.6	0.4	.....	39	2.45	nne.	3.7	.....	
						1,000	900.0	2.3	.....	35	2.52	nne.	4.4	.....	
3:51	969.2	9.0	34	nne.	4.0	853	916.7	3.5	1.25	33	2.59	nne.	4.8	0	
						750	928.1	4.8	.....	31	2.67	nne.	4.4	.....	
						500	957.0	7.9	.....	28	2.98	nne.	3.5	.....	
3:59	969.2	9.2	26	nne.	3.1	396	969.2	9.2	.....	26	3.03	nne.	3.1	.....	10/10 A.St., w.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, April, 1918*—Continued.

April 24, 1918.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
9:12	973.0	7.4	28	se.	5.8	396	973.0	7.4	.....	28	2.88	se.	5.8	.....	10/10 A.St., w.
						500	960.7	6.3	.....	28	2.67	se.	6.2	.....	
9:23	973.0	7.8	31	se.	5.4	740	932.9	3.6	1.10	29	2.29	sse.	7.0	1,800	
						750	931.8	3.5	.....	29	2.28	ese.	7.0	.....	
						1,000	903.4	1.8	.....	29	2.02	ese.	5.9	5,200	
						1,250	875.8	0.2	.....	29	1.80	e.	4.9	10,000	
10:23	972.8	8.2	30	se.	5.4	1,438	855.1	−1.1	0.67	29	1.62	e.	4.1	9,000	
						1,500	848.8	−1.5	.....	29	1.56	e.	4.0	.....	
						1,750	822.6	−3.0	.....	28	1.33	ene.	3.6	.....	
						2,000	796.5	−4.5	.....	28	1.17	ene.	3.2	.....	
11:12	972.5	8.8	29	se.	5.8	2,032	793.4	−4.7	0.62	28	1.15	ene.	3.1	.....	
						2,000	796.5	−4.5	.....	28	1.17	ene.	3.1	.....	
						1,750	822.6	−2.9	.....	29	1.39	e.	3.5	4,000	
						1,500	848.8	−1.3	.....	30	1.64	e.	3.8	.....	
						1,250	875.8	0.3	.....	31	1.93	ese.	4.1	.....	
11:26	972.5	9.0	30	se.	4.5	1,117	890.1	1.1	0.98	32	2.12	ese.	4.3	2,000	
						1,000	903.4	2.2	.....	32	2.29	ese.	4.6	.....	
						750	931.7	4.7	.....	32	2.73	ese.	5.3	.....	
11:37	972.4	9.1	32	se.	4.9	596	949.1	6.2	1.40	32	3.03	ese.	5.7	.....	
						500	960.0	7.5	.....	32	3.32	ese.	4.7	.....	
11:41	972.4	9.0	32	ese.	3.6	396	972.4	9.0	.....	32	3.67	ese.	3.6	.....	9/10 A.St., w.

April 25, 1918 (No. 1).

A. M.															
7:53	968.2	6.7	68	se.	4.9	396	968.2	6.7	.....	68	6.67	se.	4.9	.....	Cloudless.
						500	955.9	6.0	.....	67	6.26	sse.	5.3	.....	
8:07	968.1	6.7	65	sse.	4.0	670	936.3	4.8	0.69	65	5.59	s.	6.0	1,040	
						750	927.3	4.5	.....	62	5.22	s.	6.2	.....	
						1,000	899.7	3.4	.....	54	4.21	sse.	6.7	4,400	
						1,250	872.7	2.4	.....	46	3.44	sse.	7.2	6,200	
8:59	967.6	8.7	59	sse.	4.0	1,475	847.7	1.4	0.42	39	2.64	se.	7.7	.....	
						1,500	845.8	1.6	.....	38	2.61	se.	7.3	.....	
						1,750	819.0	3.6	.....	26	2.16	ese	3.8	.....	
9:36	967.6	9.9	53	s.	4.5	1,796	814.8	4.0	−0.81	24	1.95	ese	3.1	9,000	
						2,000	793.9	3.0	.....	40	3.03	se.	1.5	.....	
11:04	967.1	11.7	48	sse.	5.4	2,192	775.7	2.0	0.30	56	3.95	sse.	0	.....	Cloudless.
						2,000	793.9	1.6	.....	57	3.91	sse.	1.6	5,000	
						1,750	819.0	1.1	.....	57	3.77	se.	3.7	.....	
11:22	966.8	12.5	49	sse.	5.4	1,572	837.2	0.7	0.83	58	3.73	se.	5.2	.....	2/10 Ci.St., wnw.; Few Cu., ssw.
						1,500	844.6	1.3	.....	58	3.89	se.	5.2	.....	
						1,250	871.0	3.4	.....	58	4.52	se.	5.4	.....	
						1,000	898.0	5.4	.....	58	5.20	sse.	5.5	4,000	
						750	925.9	7.5	.....	58	6.01	sse.	5.6	1,200	
11:53	966.3	12.3	43	sse.	4.9	738	927.3	7.6	1.58	58	6.06	sse.	5.6	1,010	
						500	954.1	11.4	.....	48	6.47	sse.	5.5	.....	
11:58	966.2	13.0	44	sse.	5.4	396	966.2	13.0	.....	44	6.59	sse.	5.4	.....	2/10 Ci.St., wnw.; Few Cu., ssw.

April 25, 1918 (No. 2).

P. M.															
12:39	965.7	13.8	42	sse.	6.7	396	965.7	13.8	.....	42	6.63	sse.	6.7	.....	2/10 Ci.St., wsw.
						500	953.7	11.6	.....	46	6.28	se.	5.9	.....	
12:46	965.6	13.8	40	sse.	6.3	600	942.4	9.5	2.11	50	5.94	se.	5.1	950	
						750	925.5	8.3	.....	50	5.48	se.	5.2	2,400	
						1,000	897.5	6.3	.....	51	4.87	se.	5.3	.....	
						1,250	870.0	4.3	.....	52	4.32	se.	5.4	.....	
1:48	964.9	13.8	36	sse.	5.8	1,274	867.6	4.1	0.86	52	4.26	se.	5.4	.....	
						1,250	870.0	4.3	.....	52	4.32	se.	5.4	.....	
						1,000	897.5	6.7	.....	50	4.90	se.	5.4	0	
						750	925.0	9.0	.....	48	5.51	se.	5.5	.....	
2:03	964.8	14.6	37	sse.	5.8	706	929.8	9.4	1.29	48	5.66	se.	5.5	.....	
						500	952.7	12.1	.....	40	5.65	se.	5.4	.....	
2:16	964.6	13.4	36	se.	5.4	396	964.6	13.4	.....	36	5.53	se.	5.4	.....	1/10 Ci.St., wsw.

April 27, 1918.

A. M.															
7:22	964.2	8.0	87	e.	3.1	396	964.2	8.0	.....	87	9.34	e.	3.1	.....	
						500	951.8	7.9	.....	86	9.16	e.	4.5	.....	5/10 A.St., w.; 5/10 St.Cu., sse.
						750	923.3	7.6	.....	83	8.67	se.	7.8	.....	
7:31	964.1	8.6	88	e.	3.1	837	913.9	7.5	0.11	82	8.50	se.	8.9	0	
						1,000	895.7	6.8	.....	82	8.10	se.	8.1	.....	
						1,250	869.0	5.9	.....	81	7.52	se.	7.0	.....	
7:46	964.0	9.2	85	e.	4.0	1,263	867.8	5.8	0.40	81	7.47	se.	6.9	2,700	
7:51	963.9	9.3	85	e.	4.0	1,295	864.3	7.8	−6.25	64	6.77	se.	8.6	.....	
						1,500	842.8	7.6	.....	67	6.99	se.	5.9	.....	
8:00	963.8	9.4	85	e.	5.8	1,598	833.0	7.5	0.10	68	7.05	se.	4.6	.....	10/10 St.Cu., sse.
						1,750	817.5	6.5	.....	74	7.16	se.	4.2	2,800	Altitude of St.Cu. base about 1,800 m.
						2,000	793.0	4.9	.....	83	8.19	se.	3.6	3,200	10/10 St.Cu., se.
8:54	963.5	10.4	79	e.	5.8	2,100	783.4	4.3	0.64	87	7.23	se.	3.4	.....	Altitude of St.Cu. base about 1,900 m.
						2,250	769.0	3.7	.....	87	6.93	se.	4.3	4,200	Altitude of St.Cu. base about 2,600 m.
						2,500	745.5	2.6	.....	87	6.41	se.	5.9	.....	
						2,750	723.0	1.5	.....	87	5.92	sse.	7.5	.....	
						3,000	701.1	0.5	.....	87	5.51	sse.	9.1	.....	
9:14	963.5	10.4	79	ese.	4.9	3,066	695.2	0.2	0.42	87	5.39	see.	9.5	8,000	

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, April, 1918*—Continued.

April 27, 1918—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
						3,250	680.0	−1.0	.....	89	5.00	sse.	9.9	.....	
						3,500	658.8	−2.6	.....	92	4.53	s.	10.4	7,800	
						3,750	638.0	−4.2	.....	95	4.08	s.	10.9	.....	
9:27	963.5	10.7	80	ese.	4.5	3,851	629.5	−4.9	0.57	96	3.89	s.	11.1	.....	10/10 St.Cu., sse.
						3,750	638.0	−4.4	.....	96	4.05	s.	10.9	.....	
						3,500	658.8	−3.2	.....	97	4.54	s.	10.4	7,200	
						3,250	680.0	−1.9	.....	98	5.12	s.	9.8	.....	
						3,000	701.1	−0.7	.....	98	5.64	sse.	9.3	.....	
						2,750	722.9	0.6	.....	99	6.32	sse.	8.7	.....	
						2,500	745.0	1.8	.....	100	6.96	sse.	8.2	.....	
9:50	963.5	11.2	78	se.	5.4	2,400	754.7	2.3	0.56	100	7.21	sse.	8.0	3,800	
						2,250	768.6	3.1	.....	100	7.63	sse.	7.2	.....	
						2,000	792.5	4.6	.....	100	8.48	sse.	6.0	.....	
10:03	963.5	11.2	78	se.	4.5	1,904	802.0	5.1	−0.10	100	8.79	sse.	5.5	.....	
						1,750	817.0	5.0	.....	97	8.46	sse.	6.4	.....	Altitude of St.Cu. base about 1,750 m.
10:13	963.3	11.2	78	se.	4.5	1,592	833.0	4.8	0.37	94	8.08	se.	7.3	1,600	
						1,500	842.4	5.1	.....	94	8.26	se.	7.1	.....	
						1,250	868.0	6.1	.....	95	8.95	se.	6.6	950	
						1,000	894.7	7.0	.....	95	9.52	se.	6.1	.....	
						750	922.9	8.0	.....	96	10.30	se.	5.6	.....	
10:34	963.1	11.3	78	se.	4.0	605	939.1	8.5	1.34	96	10.66	se.	5.3	0	
						500	951.2	9.9	.....	87	10.61	se.	4.4	.....	
10:40	963.0	11.3	78	se.	3.6	396	963.0	11.3	.....	78	10.44	se.	3.6	.....	10/10 St , sse.

April 28, 1918.

A. M.															
6:40	960.1	1.7	88	wnw.	8.0	396	960.1	1.7	.....	88	6.08	wnw.	8.0	.....	Cloudless
						500	948.0	1.1	.....	86	5.69	wnw.	9.6	.....	
						750	919.0	− 0.2	.....	81	4.87	nw.	13.4	0	
						1,000	890.5	− 1.5	.....	77	4.15	nw.	17.2	.....	
7:36	959.9	3.1	84	wnw.	9.4	1,089	880.5	− 2.0	0.53	75	3.88	nw.	18.6	1,400	
						1,250	862.5	− 3.3	.....	75	3.48	nw.	19.5	.....	
						1,500	835.4	− 5.3	.....	76	2.97	wnw.	20.8	.....	
						1,750	809.5	− 7.3	.....	77	2.53	wnw.	22.2	3,400	Cloudless.
7:53	959.8	3.6	81	wnw.	11.2	1,769	807.6	− 7.5	0.81	77	2.49	wnw.	22.3	.....	Few St.Cu., wnw.
						2,000	783.5	− 7.3	.....	69	2.27	wnw.	21.8	.....	2/10 Cu., wnw.
						2,250	759.0	− 7.0	.....	61	2.06	w.	21.3	5,400	
						2,500	735.2	− 6.7	.....	53	1.84	w.	20.9	7,000	
8:56	959.4	5.2	74	wnw.	13.9	2,629	723.5	− 6.6	−0.10	49	1.72	w.	20.6	.....	
						2,500	735.2	− 6.9	.....	48	1.64	w.	20.9	.....	
9:02	959.4	5.3	74	wnw.	11.6	2,400	745.1	− 7.2	−0.20	47	1.56	w.	21.1	8,000	5/10 Cu., wnw.
						2,500	735.2	− 7.2	.....	44	1.46	w.	22.1	.....	
						2,750	712.3	− 7.2	.....	37	1.23	w.	24.7	.....	
9:25	939.3	6.4	74	wnw.	13.0	2,862	702.1	− 7.2	0.21	34	1.13	w.	25.9	8,800	8/10 Cu., wnw.
						2,750	712.3	− 6.7	.....	37	1.28	w.	24.9	.....	
9:36	959.2	6.0	70	wnw.	13.9	2,605	725.1	− 6.1	−1.37	40	1.46	w.	23.7	6,200	Altitude of Cu. base about 1,200 m.
						2,500	735.2	− 7.5	.....	55	1.78	w.	20.6	.....	
9:53	959.1	6.9	66	wnw.	14.8	2,291	755.1	−10.4	0.73	85	2.13	w.	14.5	5,000	6/10 Cu., wnw.
						2,250	759.0	−10.1	.....	85	2.18	w.	14.5	.....	Altitude of Cu. base about 2,100 m.
						2,000	783.5	− 8.3	.....	83	2.51	w.	14.5	3,200	
						1,750	809.5	− 6.4	.....	82	2.92	wnw.	14.4	.....	
10:20	959.1	7.3	60	wnw.	12.1	1,542	831.7	− 4.9	0.86	81	3.28	wnw.	14.4	2,500	
						1,500	835.4	− 4.5	.....	81	3.39	wnw.	14.6	.....	
						1,250	862.5	− 2.4	.....	78	3.90	wnw.	15.9	.....	8/10 Cu., wnw.
						1,000	890.5	− 0.2	.....	76	4.57	wnw.	17.1	980	
						750	918.7	1.9	.....	74	5.19	wnw.	18.4	.....	
10:44	959.1	6.7	58	wnw.	12.1	673	927.0	2.6	1.48	73	5.38	wnw.	18.8	0	
						500	947.0	5.2	.....	64	5.66	wnw.	15.2	.....	
10:52	959.1	6.7	58	wnw.	13.0	396	959.1	6.7	.....	58	5.69	wnw.	13.0	.....	9/10 Cu., wnw.

April 29, 1918.

P. M.															
1:02	963.8	11.8	48	nnw.	11.6	396	963.8	11.8	.....	48	6.64	nnw.	11.6	.....	7/10 Cu., nnw.
						500	951.3	9.6	.....	53	6.33	nnw.	13.0	.....	
						750	922.9	4.4	.....	65	5.44	nnw.	16.3	.....	
1:08	963.9	12.0	46	nnw.	11.6	776	920.3	3.8	2.11	66	5.29	nnw.	16.6	0	
						1,000	895.1	2.0	.....	72	5.08	nnw.	16.7	.....	
						1,250	868.2	0.1	.....	78	4.80	nnw.	16.9	2,300	Altitude of Cu. base about 1,800 m.
						1,500	841.5	−1.8	.....	85	4.47	nnw.	17.0	4,000	9/10 Cu. nnw.
						1,750	815.3	−3.8	.....	91	4.04	nnw.	17.1	.....	
1:44	964.3	11.6	49	nnw.	9.8	1,904	799.9	−5.0	0.78	95	3.81	nnw.	17.2	6,000	
						2,000	790.1	−5.2	.....	87	3.43	nnw.	17.2	.....	
						2,250	766.0	−5.8	.....	66	2.48	nnw.	17.2	.....	
						2,500	742.3	−6.4	.....	45	1.60	nnw.	17.2	9,000	
2:21	964.5	12.5	46	nnw.	9.8	2,528	739.5	−6.5	0.36	43	1.52	nnw.	17.2	8,800	
						2,500	742.3	−6.4	.....	45	1.60	nnw.	17.1	.....	
						2,250	766.8	−5.2	.....	60	2.36	nnw.	16.6	7,700	
						2,000	791.7	−4.0	.....	76	3.32	nnw.	16.0	2,300	
3:00	964.5	13.5	44	nnw.	11.2	1,818	810.1	−3.1	1.07	87	4.10	nnw.	15.6	3,700	Altitude of Cu. base about 1,800 m.
						1,750	816.9	−2.4	.....	85	4.25	nnw.	15.7	.....	
						1,500	842.1	0.3	.....	76	4.74	nnw.	15.9	.....	
						1,250	868.6	3.0	.....	68	5.15	nnw.	16.1	2,000	
						1,000	896.2	5.6	.....	59	5.37	nnw.	16.3	.....	
3:26	964.8	12.8	44	nnw.	8.9	852	913.2	7.2	1.25	54	5.49	nnw.	16.4	0	
						750	924.1	8.5	.....	51	5.66	nnw.	15.3	.....	
						500	952.6	11.6	.....	44	6.01	nnw.	12.7	.....	
3:35	965.0	12.9	41	nnw.	11.6	396	965.0	12.9	.....	41	6.10	nnw.	11.6	.....	8/10 Cu., nnw.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, April, 1918*—Continued.

April 30, 1918.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\nabla t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
8:32	976.6	7.4	51	n.	3.1	396	976.6	7.4	.....	51	5.25	n.	3.1	.....	Cloudless.
						500	964.6	5.9	.....	55	5.11	n.	2.6	.....	
8:44	976.6	7.2	51	n.	3.6	713	939.3	2.9	1.41	64	4.82	nnw.	1.6	0	
						750	935.3	2.8	.....	63	4.71	nnw.	1.9	.....	
						1,000	907.0	1.4	.....	55	3.72	nnw.	3.7	.....	
						1,250	879.4	0.1	.....	47	2.89	nnw.	5.5	.....	
						1,500	852.2	− 1.2	.....	39	2.16	nnw.	7.3	.....	
						1,750	825.9	− 2.6	.....	31	1.53	nnw.	9.2	.....	
9:51	977.0	8.9	35	nw.	1.6	1,986	801.7	− 3.8	0.53	24	1.07	nnw.	10.9	6,800	Cloudless.
						2,000	800.6	− 3.8	.....	24	1.07	nnw.	10.9	.....	
						2,250	775.9	− 4.9	.....	24	0.97	nnw.	11.2	.....	
						2,500	752.0	− 6.0	.....	23	0.85	nnw.	11.4	.....	
						2,750	728.4	− 7.1	.....	23	0.77	nnw.	11.6	9,700	Few Cu., n.
						3,000	705.0	− 8.1	.....	22	0.68	nnw.	11.9	.....	
10:31	977.0	9.4	39	ne.	5.4	3,227	684.5	− 9.1	0.43	22	0.62	nnw.	12.1	11,500	
						3,250	682.5	− 9.2	.....	22	0.61	nnw.	12.1	.....	
						3,500	660.8	−10.5	.....	28	0.69	nnw.	12.5	.....	
						3,750	639.7	−12.0	.....	33	0.72	nnw.	12.9	.....	
						4,000	619.3	−13.3	.....	39	0.75	nw.	13.2	.....	
						4,250	599.8	−14.7	.....	44	0.75	nw.	13.6	.....	Cloudless.
11:20	977.0	10.6	37	nne.	3.6	4,395	588.1	−15.5	0.55	47	0.74	nw.	13.8	16,400	
						4,500	580.5	−16.2	.....	47	0.70	nw.	14.2	.....	
						4,750	561.6	−17.8	.....	47	0.60	nw.	15.0	.....	
						5,000	543.3	−19.4	.....	46	0.50	nw.	15.9	.....	
						5,250	525.3	−21.0	.....	46	0.43	nw.	16.8	17,500	
P. M.															
12:35	977.0	11.8	31	n.	4.0	5,425	513.0	−22.1	0.67	46	0.39	nw.	17.4	19,000	
						5,250	525.3	−20.9	.....	46	0.43	nw.	16.9	.....	
						5,000	543.3	−19.2	.....	47	0.52	nw.	16.1	.....	
						4,750	561.6	−17.4	.....	48	0.63	nnw.	15.3	11,400	
						4,500	580.5	−15.7	.....	48	0.74	nnw.	14.5	.....	
						4,250	600.5	−14.0	.....	49	0.89	nnw.	13.7	.....	
1:20	977.0	12.6	29	ne.	3.6	4,138	609.4	−13.2	0.50	49	0.96	nnw.	13.4	.....	
						4,000	620.5	−12.5	.....	48	0.99	nnw.	12.6	.....	
						3,750	641.0	−11.3	.....	45	1.04	nnw.	11.1	.....	
						3,500	662.0	−10.0	.....	43	1.12	nnw.	9.6	6,000	
						3,250	683.8	− 8.8	.....	40	1.16	nnw.	8.2	.....	
						3,000	706.0	− 7.5	.....	38	1.23	nnw.	6.7	.....	
						2,750	729.1	− 6.3	.....	35	1.26	nnw.	5.2	.....	
1:36	977.0	12.7	34	nne.	2.4	2,548	748.1	− 5.3	0.63	33	1.29	nnw.	4.0	.....	
						2,500	752.5	− 5.0	.....	33	1.32	nnw.	3.9	.....	
						2,250	776.5	− 3.4	.....	35	1.61	nnw.	3.7	.....	
						2,000	801.3	− 1.8	.....	36	1.89	nnw.	3.4	.....	
						1,750	827.0	− 0.3	.....	38	2.26	nnw.	3.2	.....	
						1,500	853.6	1.3	.....	39	2.62	nnw.	2.9	.....	
						1,250	880.8	2.9	.....	41	3.09	nnw.	2.6	.....	
1:43	977.0	13.0	31	nne.	2.4	1,042	903.6	4.2	1.38	42	3.46	nnw.	2.4	.....	
						1,000	908.0	4.8	.....	40	3.44	n.	2.6	.....	
2:03	977.0	13.2	28	nne.	3.6	882	921.4	6.4	1.60	35	3.36	nne.	3.1	.....	
						750	936.1	8.5	.....	33	3.66	nne.	2.9	.....	
						500	964.6	12.5	.....	30	4.35	nne.	2.4	.....	
2:11	976.9	14.2	29	nne.	2.2	396	976.9	14.2	.....	29	4.70	nne.	2.2	.....	Cloudless.

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, May, 1918.*

May 1, 1918 series (No. 1).

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
6:57	978.4	6.9	51	sw.	9.8	396	978.4	6.9	.....	51	5.07	sw.	9.8	.....	Cloudless.
						500	966.0	7.2	.....	49	4.98	sw.	12.1	.....	
						750	937.3	8.0	.....	44	4.72	ssw.	17.7	.....	
7:05	978.4	7.2	50	sw.	8.9	857	925.2	8.3	−0.30	42	4.60	ssw.	20.1	1,170	
						1,000	909.2	7.0	.....	45	4.51	ssw.	19.7	.....	
7:12	978.4	7.4	50	sw.	9.8	1,178	889.7	5.4	0.90	49	4.40	sw.	19.3	3,300	
						1,250	882.0	6.1	.....	43	4.05	sw.	15.0	.....	
7:37	978.4	8.6	48	sw.	9.8	1,392	867.1	7.4	−0.93	30	3.09	ssw.	6.5	4,000	
						1,500	856.0	6.9	.....	31	3.08	ssw.	6.6	.....	
						1,750	830.3	5.8	.....	33	3.04	sw.	7.0	5,500	
						2,000	805.4	4.7	.....	35	2.99	sw.	7.3	6,100	
						2,250	781.8	3.5	.....	37	2.90	sw.	7.6	.....	
						2,500	758.0	2.4	.....	38	2.76	wsw.	7.9	.....	
8:51	978.1	13.3	37	sw.	13.0	2,570	751.6	2.1	0.45	39	2.77	wsw.	8.0	8,800	
						2,750	734.8	0.5	.....	42	2.66	w.	8.2	7,400	
						3,000	712.2	−1.7	.....	47	2.49	w.	8.4	.....	
						3,250	690.0	−3.9	.....	52	2.29	wnw.	8.6	.....	
9:07	977.9	13.7	36	sw.	10.3	3,274	687.9	−4.1	0.86	52	2.25	wnw.	8.6	.....	
						3,250	690.0	−3.9	.....	52	2.29	wnw.	8.9	.....	
						3,000	712.2	−1.8	.....	48	2.52	w.	11.7	.....	
						2,750	734.8	0.3	.....	43	2.68	wsw.	14.6	.....	
9:36	977.6	15.0	37	sw.	13.4	2,686	740.1	0.8	0.70	42	2.72	wsw.	15.3	6,500	
						2,500	757.3	2.1	.....	41	2.92	wsw.	15.0	.....	
						2,250	781.0	3.9	.....	39	3.15	wsw.	14.6	4,400	
						2,000	805.4	5.6	.....	37	3.37	sw.	14.2	.....	
						1,750	830.3	7.4	.....	35	3.60	sw.	13.8	.....	
10:03	977.4	15.3	36	sw.	13.9	1,678	837.7	7.9	0.56	34	3.62	sw.	13.5	3,400	
						1,500	856.0	8.9	.....	33	3.76	sw.	15.6	.....	
						1,250	882.0	10.3	.....	32	4.01	sw.	18.6	.....	
10:15	977.2	16.0	36	sw.	11.6	1,195	888.0	10.6	−0.83	32	4.09	sw.	19.3	2,700	
10:21	977.0	15.9	36	sw.	13.4	1,062	902.0	9.5	0.44	33	3.92	sw.	15.2	.....	
						1,000	908.8	9.8	.....	35	4.24	sw.	15.1	.....	
						750	936.6	10.4	.....	41	5.17	ssw.	14.9	.....	
10:30	976.9	16.2	37	sw.	12.1	723	939.5	11.0	1.99	42	5.51	ssw.	14.9	615	
						500	964.8	15.4	.....	37	6.48	sw.	15.1	.....	
10:36	976.8	17.5	35	sw.	15.2	396	976.8	17.5	.....	35	7.00	sw.	15.2	.....	Cloudless.

May 1, 1918, series (No. 2).

A. M.															
11:38	976.1	19.2	29	ssw.	13.0	396	976.1	19.2	.....	29	6.45	ssw.	13.0	.....	Cloudless.
						500	954.3	17.1	.....	32	6.24	ssw.	12.7	.....	
11:47	976.1	18.8	29	ssw.	14.3	670	945.1	13.6	2.04	36	5.61	s.	12.3	515	
						750	936.2	12.9	.....	37	5.51	s.	12.5	.....	
						1,000	908.5	10.8	.....	42	5.44	ssw.	13.0	.....	
11:58	976.0	19.2	29	ssw.	9.8	1,120	895.5	9.8	0.84	44	5.33	ssw.	13.2	2,700	
						1,250	881.9	9.2	.....	43	5.01	ssw.	13.3	.....	
						1,500	855.6	8.0	.....	42	4.51	ssw.	13.5	.....	
						1,750	829.7	6.8	.....	41	4.05	sw.	13.7	5,000	
						2,000	804.8	5.6	.....	40	3.64	sw.	13.9	.....	
						2,250	780.4	4.4	.....	38	3.18	sw.	14.1	.....	
P. M.															
12:24	975.6	19.4	29	ssw.	12.5	2,314	774.3	4.1	0.48	38	3.11	sw.	14.2	5,700	
						2,500	756.2	2.8	.....	40	2.99	sw.	14.5	.....	
						2,750	733.0	1.1	.....	44	2.91	wsw.	15.0	7,400	
						3,000	711.0	−0.6	.....	47	2.73	wsw.	15.4	.....	
12:51	975.2	20.2	28	ssw.	12.5	3,157	697.3	−1.7	0.69	19	2.60	wsw.	15.7	8,900	
						3,250	689.3	−2.4	.....	50	2.50	wsw.	16.1	.....	
						3,500	668.0	−4.2	.....	51	2.19	wsw.	17.0	.....	
1:14	974.7	20.6	26	s.	15.2	3,714	649.8	−5.8	0.77	53	1.99	wsw.	17.8	9,400	
						3,500	668.0	−4.1	.....	53	2.29	wsw.	17.6	.....	
						3,250	689.3	−2.0	.....	54	2.79	sw.	17.5	.....	
1:45	974.0	21.6	27	ssw.	13.9	3,049	706.9	−0.4	0.75	54	3.19	sw.	17.3	6,000	
						3,000	711.0	−0.4	.....	53	3.13	sw.	17.0	.....	
						2,750	733.0	1.9	.....	50	3.50	sw.	15.5	.....	
						2,500	755.8	3.7	.....	46	3.66	sw.	14.0	.....	
2:03	973.6	21.5	26	ssw.	14.8	2,360	769.3	4.8	0.48	44	3.78	sw.	13.2	3,600	
						2,250	779.8	5.3	.....	43	3.83	sw.	14.2	.....	
						2,000	804.0	6.5	.....	40	3.87	ssw.	16.5	.....	
2:13	973.5	21.4	27	ssw.	14.3	1,842	819.6	7.3	2.10	39	3.99	ssw.	18.0	.....	
						1,750	828.6	7.5	.....	41	4.25	ssw.	17.5	1,105	
2:24	973.5	21.6	26	ssw.	17.0	1,604	843.5	7.8	1.01	44	4.66	ssw.	16.7	.....	
						1,500	854.4	8.9	.....	43	4.90	ssw.	16.5	.....	
						1,250	880.8	11.4	.....	40	5.30	ssw.	16.2	.....	
						1,000	907.0	13.9	.....	37	5.88	s.	15.8	425	
2:45	973.4	23.0	26	ssw.	16.1	763	932.6	16.3	1.55	34	6.30	s.	15.4	.....	
						750	934.0	16.5	.....	34	6.38	s.	15.5	0	
						500	961.5	20.3	.....	27	6.43	ssw.	16.8	.....	
2:56	973.3	22.0	24	ssw.	17.4	396	973.3	22.0	.....	24	6.35	ssw.	17.4	.....	Cloudless.

May 1, 1918, series (No. 3).

P. M.															
3:31	973.1	22.3	25	ssw.	17.9	396	973.1	22.3	.....	25	6.73	ssw.	17.9	.....	Cloudless.
						500	961.2	20.7	.....	26	6.35	ssw.	17.7	.....	
						750	933.7	17.0	.....	27	5.23	ssw.	17.2	950	
3:43	973.1	22.3	25	ssw.	15.2	930	914.2	14.3	1.50	28	4.56	ssw.	16.8	.....	
						1,000	906.6	13.7	.....	30	4.70	ssw.	16.7	0	
						1,250	880.0	11.4	.....	36	4.85	ssw.	16.3	.....	
						1,500	853.9	9.1	.....	43	4.97	ssw.	15.9	.....	

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, May, 1918*—Continued.

May 1, 1918, series (No. 3)—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
4:00	973.0	22.0	23	SSW.	14.8	1,511	852.7	9.0	0.91	43	4.94	SSW.	15.9	.....	Few St.Cu., WNW.
						1,750	828.2	6.7	.....	48	4.71	SSW.	15.1	.....	
4:10	972.9	22.2	24	SSW.	16.1	2,004	802.9	4.3	0.95	53	4.40	SW.	14.3	0	
						2,250	778.9	4.4	.....	42	3.52	WSW.	10.3	.....	
						2,500	755.1	4.6	.....	30	2.54	WNW.	6.2	3,000	
4:58	972.6	21.6	25	SW.	14.3	2,563	749.2	4.6	−0.54	27	2.29	WNW.	5.2	3,800	
						2,750	732.3	3.0	.....	30	2.27	WNW.	6.9	.....	
						3,000	710.0	0.8	.....	33	2.14	**WNW.**	**9.1**	.....	**2/10 St.Cu., WNW.**
5:07	972.6	21.3	26	SW.	15.2	3,229	690.1	−1.2	0.68	36	1.99	WNW.	11.2	.....	
						3,000	710.0	0.7	.....	35	2.25	WNW.	9.3	.....	
						2,750	723.3	2.8	.....	33	2.47	W.	7.2	.....	
5:22	972.6	20.9	29	SW.	14.3	2,514	754.2	4.7	0.44	32	2.73	W.	5.3	.....	
						2,500	755.1	4.8	.....	32	2.75	W.	5.4	.....	
						2,250	778.9	5.9	.....	37	3.44	WSW.	8.0	3,700	
						2,000	803.3	7.0	.....	41	4.11	WSW.	10.6	.....	
						1,750	828.2	8.1	.....	46	4.97	SW.	13.2	.....	
						1,500	853.6	9.2	.....	50	5.82	SSW.	15.8	.....	
5:53	972.6	21.2	28	SSW.	13.9	1,457	857.9	9.4	0.96	51	6.01	SSW.	16.2	1,800	
						1,250	879.4	11.4	.....	48	6.47	SSW.	16.3	.....	1/10 St.Cu., WNW.
						1,000	906.0	13.8	.....	44	6.94	SSW.	16.5	0	
						750	933.0	16.2	.....	40	7.37	SSW.	16.7	.....	
6:20	972.5	20.7	30	SSW.	13.4	613	948.3	17.5	1.38	38	7.60	SSW.	16.8	.....	
						500	960.8	19.1	.....	34	7.52	SSW.	15.4	.....	
6:26	972.5	20.5	30	SSW.	16.1	396	972.5	20.5	.....	30	7.24	SSW.	16.1	.....	1/10 St.Cu., WNW.

May 1, 1918, series (No. 4).

P. M.															
7:11	972.4	18.7	38	SSW.	11.2	396	972.4	18.7	.....	38	8.20	SSW.	11.2	.....	Few St.Cu., WNW.
						500	961.0	17.9	.....	38	7.79	SSW.	13.9	.....	
7:19	972.4	18.3	39	SSW.	11.2	674	941.2	16.6	0.76	38	7.18	SSW.	18.5	0	
						750	933.0	16.0	.....	39	7.09	SSW.	18.7	.....	
						1,000	905.8	14.1	.....	42	6.76	SSW.	19.2	800	
						1,250	879.5	12.2	.....	45	6.39	SSW.	19.7	.....	
7:42	972.5	18.2	38	SSW.	10.7	1,387	865.0	11.2	0.76	47	6.25	SSW.	20.0	2,100	
						1,500	853.5	10.9	.....	45	5.87	SSW.	18.0	.....	
						1,750	828.4	10.1	.....	40	4.94	SW.	13.6	.....	
						2,000	803.5	9.4	.....	34	4.01	WSW.	9.3	.....	
8:20	972.8	17.0	42	SSW.	8.5	2,164	787.9	8.9	0.30	31	3.53	WSW.	6.4	3,600	
						2,250	779.5	8.2	.....	32	3.48	WSW.	6.8	4,400	
						2,500	756.0	6.0	.....	34	3.18	WSW.	8.1	5,200	
						2,750	733.5	3.9	.....	37	2.99	WSW.	9.4	.....	
						3,000	711.7	1.7	.....	39	2.69	WSW.	10.6	.....	
8:33	973.0	17.0	42	SSW.	8.5	3,190	695.2	0.1	0.91	41	2.52	WSW.	11.6	.....	
						3,000	711.7	1.9	.....	40	2.80	WSW.	12.0	.....	
						2,750	734.0	4.3	.....	38	3.16	WSW.	12.5	.....	
						2,500	756.8	6.8	.....	37	3.66	SW.	13.1	4,000	
						2,250	780.0	9.2	.....	35	4.07	SW.	13.6	.....	
9:05	973.3	16.4	44	SSW.	8.5	2,205	784.6	9.6	0.37	35	4.18	SW.	13.7	3,600	
						2,000	803.8	10.4	.....	36	4.54	SW.	14.8	.....	
						1,750	828.6	11.3	.....	38	5.09	SW.	16.2	.....	
						1,500	854.0	12.2	.....	40	5.68	SSW.	17.5	.....	
						1,250	879.5	13.2	.....	41	6.22	SSW.	18.9	.....	
						1,000	905.8	14.1	.....	43	6.92	SSW.	20.3	.....	
9:31	973.3	16.1	44	SSW.	8.5	810	926.8	14.8	0.17	44	7.41	SSW.	21.3	640	
						750	933.0	14.9	.....	44	7.45	SSW.	19.6	620	
						500	961.0	15.3	.....	45	7.82	SSW.	12.7	0	
9:54	973.3	15.5	45	SSW.	9.8	396	973.3	15.5	.....	45	7.92	SSW.	9.8	.....	Few St.Cu., WNW.

May 1–2, 1918, series (No. 5).

P. M.															
10:38	973.3	15.1	45	SSW.	8.9	396	973.3	15.1	.....	45	7.72	SSW.	8.9	.....	Few St.Cu., WNW.
						500	961.0	15.0	.....	45	7.67	SSW.	.....	.....	
10:47	973.3	15.0	45	SSW.	10.7	713	937.5	14.9	0.07	46	7.79	SSW.	.....	170	
						750	933.3	14.9	.....	45	7.62	SSW.	.....	620	
						1,000	906.0	14.8	.....	38	6.40	SW.	.....	.....	
11:03	973.3	15.0	48	SSW.	9.8	1,122	893.1	14.7	0.05	35	5.86	SW.	.....	2,200	
						1,250	879.8	14.5	.....	33	5.45	SW.	.....	.....	
						1,500	854.0	14.1	.....	30	4.83	SW.	.....	.....	
11:23	973.4	14.7	48	SSW.	9.8	1,578	846.3	14.0	0.12	29	4.63	SW.	.....	3,500	3/10 St.Cu., SW.
						1,500	854.0	14.1	.....	29	4.67	SW.	.....	.....	
						1,250	879.8	14.3	.....	31	5.05	SW.	.....	.....	
						1,000	906.0	14.4	.....	32	5.28	SW.	.....	.....	
11:40	973.5	14.6	48	SSW.	10.3	796	928.5	14.6	−0.12	33	5.48	SW.	9.3	1,600	
						750	933.3	14.5	.....	35	5.78	SW.	9.2	.....	
						500	961.0	14.2	.....	44	7.12	SSW.	8.3	.....	
A. M.															
12:19	973.6	14.1	48	SSW.	8.0	396	973.6	14.1	.....	48	7.72	SSW.	8.0	.....	4/10 St., Cu., SW.

May 2, 1918, series (No. 6).

A. M.															
1:57	973.6	13.6	46	SW.	6.7	396	973.6	13.6	.....	46	7.17	SW.	6.7	.....	3/10 St.Cu., WSW.
						500	961.0	13.4	.....	44	6.76	SW.	.....	.....	
						750	933.0	13.1	.....	39	5.88	SW.	.....	.....	
2:04	973.6	13.6	46	SW.	6.7	795	928.4	13.0	0.15	38	5.69	SW.	.....	0	
						1,000	906.0	15.0	.....	34	5.80	SW.	.....	.....	

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, May, 1918*—Continued.

May 2, 1918, series (No. 6)—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
2:08	973.6	13.5	47	sw.	7.6	1,127	892.7	16.3	−0.99	32	5.93	sw.		2,000	
						1,250	879.7	15.8		29	5.21	sw.			
						1,500	854.0	14.6		23	3.82	wsw.			
						1,750	829.0	13.5		18	2.78	wsw.		3,500	
2:33	973.6	13.8	44	sw.	8.0	1,778	826.6	13.4	0.78	17	2.61	wsw.	27.7	3,800	
2:37	973.6	13.7	45	sw.	8.5	1,750	829.0	13.7		17	2.67	wsw.			
						1,538	850.7	16.1	0.03	17	3.11	wsw.			
						1,500	854.0	16.1		17	3.11	wsw.			
						1,250	879.7	16.2		18	3.32	wsw.			
						1,000	906.0	16.3		20	3.71	sw.		1,500	
3:18	973.6	13.2	46	sw.	9.4	960	910.5	16.3	−0.99	20	3.71	sw.			
						750	933.0	14.2		25	4.05	sw.			
3:28	973.6	12.8	49	sw.	7.6	667	942.8	13.4	−0.18	27	4.15	sw.		0	
						500	961.0	13.1		39	5.88	sw.			
3:34	973.6	12.9	46	sw.	7.2	396	973.6	12.9		46	6.84	sw.	7.2		3/10 St.Cu., wsw.

May 2, 1918, series (No. 7).

A. M.															
6:13	974.4	11.2	52	sw.	5.8	396	974.4	11.2		52	6.92	sw.	5.8		2/10 St.Cu., wsw.
						500	962.5	11.8		48	6.64	sw.	10.5		
						750	934.5	13.4		39	5.99	wsw.	21.7		
6:19	974.4	11.6	51	sw.	5.8	811	927.3	13.8	−0.63	37	5.84	wsw.	24.4	0	
						1,000	907.0	17.1		22	4.29	wsw.	23.7		
6:25	974.5	11.8	52	sw.	4.9	1,061	900.6	18.1	−0.72	17	3.53	wsw.	23.5	1,140	
						1,250	881.0	16.9		18	3.46	wsw.	21.5		
						1,500	855.0	15.4		19	3.32	wsw.	18.8		
						1,750	830.5	13.8		21	3.31	wsw.	15.2		
						2,000	806.2	12.3		22	3.15	wsw.	13.5		
6:51	974.6	12.2	52	sw.	4.0	2,027	803.6	12.1	0.62	22	3.11	wsw.	13.2	4,100	1/10 St.Cu., wsw.
						2,250	782.5	10.1		23	2.86	wsw.	13.8		
						2,500	759.0	7.9		24	2.56	wsw.	14.5	4,200	
						2,750	737.0	5.7		25	2.29	wsw.	15.2		
7:26	974.7	13.6	46	sw.	5.8	2,951	718.6	3.9	0.89	26	2.10	wsw.	15.8	5,300	
						3,000	714.6	3.5		27	2.12	wsw.	15.7		
						3,250	692.8	1.3		33	2.21	wsw.	14.9		
						3,500	671.3	−0.9		40	2.27	wsw.	14.2	6,000	
8:05	974.7	15.5	41	wsw.	8.0	3,537	668.5	−1.2	0.89	41	2.27	wsw.	14.1		
						3,500	671.3	−0.9		41	2.32	wsw.	14.2		
						3,250	692.8	1.4		39	2.64	wsw.	14.8		
						3,000	714.6	3.7		38	3.02	wsw.	15.5		
						2,750	737.0	6.0		36	3.37	wsw.	16.1		
8:21	974.6	16.6	38	wsw.	6.3	2,716	740.0	6.3	0.69	36	3.44	wsw.	16.2	3,500	
						2,500	759.0	7.8		30	3.17	wsw.	14.7		2/10 St.Cu., wsw.
8:42	974.4	17.4	36	wsw.	8.5	2,368	771.6	9.7	0.74	26	3.13	wsw.	13.8	2,500	
						2,250	782.5	10.6		25	3.20	wsw.	13.4		
						2,000	806.2	12.4		23	3.31	wsw.	12.7		
						1,750	830.5	14.3		21	3.42	wsw.	11.9		
						1,500	855.0	16.2		19	3.50	wsw.	11.1		
						1,250	881.0	18.0		17	3.51	wsw.	10.4	700	
9:09	974.3	18.3	32	w.	9.8	1,131	893.5	18.9	−1.47	16	3.49	wsw.	10.0		
						1,000	907.0	17.0		20	3.88	wsw.	9.8		
9:17	974.3	18.2	32	w.	8.0	798	929.1	14.0	1.04	27	4.31	wsw.	9.4	0	4/10 St.Cu., wsw.
						750	934.5	14.6		28	4.65	wsw.	9.3		
						500	962.5	17.1		31	6.04	w.	8.7		
9:23	974.3	18.2	33	w.	8.5	396	974.3	18.2		33	6.90	w.	8.5		

May 2, 1918, series (No. 8).

A. M.															
11:39	974.1	21.4	31	wsw.	5.4	396	974.1	21.4		31	7.90	wsw.	5.4		3/10 St.Cu., wsw.
						500	962.2	20.8		30	7.37	wsw.			
P. M.															
12:20	974.0	24.9	26	ssw.	4.9	747	935.3	19.4	0.57	28	6.31	sw.			
						1,000	907.7	18.1		26	5.40	sw.		0	
						1,250	881.5	16.9		24	4.62	sw.			
						1,500	856.5	15.7		22	3.92	wsw.			
						1,750	831.6	14.4		21	3.44	wsw.			
12:49	974.0	24.9	24	sw.	6.7	1,820	824.7	14.1	0.49	20	3.22	wsw.		1,800	
						2,000	807.0	12.7		19	2.79	wsw.			
						2,250	783.3	10.9		17	2.22	w.			
						2,500	760.0	9.0		15	1.72	w.			
1:07	974.0	24.6	26	wsw.	7.6	2,550	755.5	8.6	0.75	15	1.68	w.		3,300	
						2,750	737.2	6.7		18	1.77	w.			
						3,000	715.0	4.4		22	1.84	w.		4,500	2/10 St.Cu., wsw.
						3,250	693.8	2.0		26	1.84	w.			
						3,500	672.7	−0.4		30	1.77	w.			
1:40	973.7	25.9	22	wsw.	6.7	3,547	668.9	−0.8	0.94	31	1.77	w.		5,800	
						3,750	652.0	−2.6		42	2.07	w.		5,900	Few St.Cu., wsw.
2:20	973.4	27.1	21	sw.	7.2	3,815	646.6	−3.2	0.92	46	2.15	w.		5,700	
						3,750	652.0	−2.6		45	2.21	w.			
						3,500	672.7	−0.2		43	2.58	w.			
						3,250	693.8	2.1		40	2.84	w.		3,500	
						3,000	715.0	4.4		37	3.10	w.			
2:50	973.1	27.5	20	w.	8.9	2,791	733.9	6.4	0.74	35	3.36	w.		3,000	
						2,750	737.2	6.7		35	3.43	w.			
						2,500	760.0	8.6		36	4.02	wsw.			
						2,250	783.3	10.4		36	4.54	wsw.			
						2,000	807.0	12.2		36	5.12	wsw.			

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, May, 1918*—Continued.

May 2, 1918; series (No. 8)—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
						1,750	831.6	14.1		37	5.95	sw.			
3:12	972.9	28.4	18	sw.	11.6	1,682	838.4	14.6	1.08	37	6.15	sw.		880	Few Cu., wsw.
						1,500	856.5	16.6		34	6.42	sw.			
3:23	972.7	28.2	16	sw.	9.8	1,283	878.4	18.9	0.91	30	6.55	sw.		520	
						1,250	881.5	19.3		29	6.49	sw.			
						1,000	907.7	22.6		25	6.86	sw.		0	Cloudless.
						750	934.0	25.9		20	6.68	sw.			
3:45	972.5	28.0	17	sw.	10.3	589	951.5	25.2	1.45	21	6.73	sw.			
						500	961.0	26.5		19	6.43	sw.			
3:49	972.4	28.0	17	sw.	10.7	396	972.4	28.0		17	6.43	sw.	10.7		Cloudless.
May 3, 1918.															
A. M.															
7:29	973.0	15.8	49	sw.	8.7	396	973.0	15.8		49	8.80	sw.	8.7		Cloudless.
						500	961.0	17.3		47	9.28	sw.	11.2		
						750	933.3	21.0		42	10.45	wsw.	17.4		
7:36	972.9	16.4	50	sw.	10.1	805	927.6	21.8	−1.47	31	8.10	wsw.	18.7	0	
						1,000	906.7	20.5		29	6.99	wsw.	17.4		
						1,250	880.5	18.9		26	5.68	sw.	15.8	1,100	
						1,500	855.3	17.3		23	4.54	sw.	14.2		Cloudless.
7:57	972.6	17.0	46	sw.	9.7	1,690	836.4	16.1	0.64	21	3.84	sw.	13.0	2,300	
						1,750	820.7	15.6		21	3.72	sw.	12.4		
						2,000	806.2	13.6		22	3.43	sw.	10.1	3,300	
9:00	972.6	20.5	40	sw.	10.6	2,242	783.7	11.7	0.80	23	3.16	sw.	7.9		Few Ci., w.
						2,250	783.0	11.0		23	3.02	sw.	7.6	3,400	
						2,500	759.8	9.3		24	2.81	sw.	7.0	5,300	
						2,750	736.9	7.0		26	2.61	wsw.	6.0		
						3,000	714.8	4.7		27	2.31	wsw.	5.1	5,000	
9:31	972.4	22.0	35	sw.	12.0	3,141	702.5	3.4	0.94	28	2.18	wsw.	4.6		
						3,000	714.8	4.8		27	2.32	wsw.	5.4		
						2,750	736.9	7.2		25	2.54	wsw.	6.9		Few Ci., w.
10:03	972.3	23.6	34	sw.	10.1	2,548	755.2	9.1	0.88	24	2.77	wsw.	8.1	4,000	
						2,500	759.8	9.5		24	2.85	wsw.	8.5	3,400	
						2,250	783.0	11.7		23	3.16	wsw.	10.3	2,700	
						2,000	806.2	13.9		23	3.65	sw.	12.5		Cloudless.
10:27	972.3	24.9	32	sw.	10.1	1,797	826.1	15.7	0.57	22	3.92	sw.	13.7	2,000	
						1,750	830.7	16.0		22	4.00	sw.	13.6		
						1,500	855.3	17.4		25	4.97	sw.	13.0		
						1,250	880.5	18.8		27	5.86	sw.	12.5	1,080	
						1,000	906.7	20.2		30	7.10	sw.	11.9		
						750	933.3	21.6		32	8.26	sw.	11.3		
10:52	972.3	25.6	31	sw.	12.0	739	934.8	21.7	1.31	32	8.31	sw.	11.3	0	
						500	960.5	24.8		27	8.45	sw.	10.5		
10:58	972.3	26.2	25	sw.	10.1	396	972.3	26.2		25	8.50	sw.	10.1		Cloudless.
May 4, 1918.															
A. M.															
8:22	966.1	21.1	53	wsw.	8.0	396	966.1	21.1		53	13.27	wsw.	8.0		Cloudless.
						500	954.6	19.9		50	11.62	w.	9.2		
8:28	966.1	21.1	51	wsw.	8.9	578	945.9	19.0	1.15	48	10.55	w.	10.1		
						750	927.7	22.2		38	10.17	w.	11.2		
8:33	966.0	21.1	51	wsw.	9.4	844	917.2	24.0	−1.88	32	9.55	w.	11.8	0	
						1,000	900.7	22.8		31	8.61	w.	11.0		
						1,250	875.3	20.9		30	7.42	w.	9.7	1,205	
						1,500	850.5	19.0		29	6.37	w.	8.4		
9:00	965.9	22.5	46	wsw.	7.2	1,625	838.1	18.0	0.77	29	5.99	w.	7.7	1,600	
						1,750	826.0	17.0		29	5.62	w.	7.3		
						2,000	802.0	15.0		28	4.77	w.	6.6	2,100	
						2,250	778.9	13.0		27	4.04	w.	5.9	2,200	
						2,500	756.0	11.0		26	3.41	w.	5.2		
10:04	965.9	25.4	39	wsw.	7.6	2,545	751.7	10.6	0.80	26	3.32	w.	5.1	2,700	
						2,750	733.5	8.9		28	3.19	w.	5.2		
						3,000	711.6	6.7		30	2.94	w.	5.4		
						3,250	690.5	4.6		33	2.80	w.	5.6		
						3,500	669.5	2.5		35	2.56	w.	5.8		
						3,750	649.0	0.4		37	2.33	w.	6.0	3,100	
10:49	965.6	27.4	37	wsw.	6.7	3,806	644.4	−0.1	0.86	38	2.30	w.	6.0		
						3,750	649.0	0.4		38	2.39	w.	6.1	3,100	
						3,500	669.5	2.6		35	2.58	w.	6.7		
						3,250	690.5	4.7		33	2.82	wsw.	7.2		
						3,000	711.6	6.9		31	3.08	wsw.	7.7		
						2,750	733.5	9.0		29	3.33	wsw.	7.9		
11:16	965.4	28.2	32	wsw.	6.7	2,732	735.0	9.2	0.73	29	3.38	wsw.	8.3		
						2,500	756.0	10.9		31	4.04	wsw.	8.5	1,900	
						2,250	778.9	11.7		34	4.68	wsw.	8.8		
						2,000	802.0	14.5		37	6.11	wsw.	9.1	2,600	
						1,750	826.0	16.3		39	7.23	wsw.	9.3		
11:45	965.3	29.2	30	wsw.	8.5	1,574	843.3	17.6	1.05	41	8.25	wsw.	9.5	0	
						1,500	850.5	18.4		41	8.68	wsw.	9.2		
						1,250	875.3	21.0		40	9.95	wsw.	8.2		
						1,000	900.7	23.6		39	11.36	sw.	7.3		
P. M.															
12:09	964.7	29.8	29	sw.	7.2	877	913.6	24.9	1.08	38	11.97	sw.	6.8		
						750	926.8	26.3		36	11.98	sw.	7.4		
						500	953.2	29.0		30	12.02	sw.	8.4		
12:16	964.3	30.1	28	sw.	8.9	396	964.3	30.1		28	11.95	sw.	8.9		Cloudless.

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, May, 1918*—Continued.

May 5, 1918.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
6:36	962.7	16.0	74	SSW.	9.4	396	962.7	16.0		74	13.45	SSW.	9.4		7/10 Ci., ssw.
						500	951.0	15.6		72	12.76	SW.	11.6		
						750	923.1	14.5		67	11.06	WSW.	16.8		
6:41	962.7	16.2	72	SSW.	10.3	786	919.5	14.4	0.41	66	10.88	WSW.	17.5		
						1,000	896.3	15.3		69	11.99	WSW.	16.2		
6:52	962.8	16.7	71	SSW.	8.9	1,188	876.9	16.1	−0.42	71	12.99	WSW.	15.0	0	
						1,250	870.5	15.7		71	12.67	WSW.	14.9		
						1,500	845.0	14.2		70	11.33	WSW.	14.6		
						1,750	820.0	12.7		70	10.28	SW.	14.3		
						2,000	795.5	11.2		69	9.18	SW.	14.0	1,900	
						2,250	772.7	9.7		69	8.30	SSW.	13.7		
						2,500	750.0	8.2		68	7.39	SSW.	13.5		
7:17	962.9	17.9	65	SSW.	10.3	2,627	738.8	7.4	0.60	68	7.00	SSW.	13.2	3,300	
						2,750	728.2	6.7		68	6.67	SSW.	13.3		
						3,000	707.0	5.2		67	5.93	SSW.	13.5		
						3,250	686.2	3.7		66	5.25	SSW.	13.8	4,500	
						3,500	665.4	2.2		66	4.73	SW.	14.0		
						3,750	644.6	0.7		65	4.18	SW.	14.3	5,900	
						4,000	624.4	− 0.8		64	3.65	SW.	14.5		
8:09	963.0	19.2	61	SW.	9.8	4,138	613.6	− 1.6	0.60	64	3.42	SW.	14.6	7,300	
						4,250	604.8	− 2.3		65	3.28	SW.	14.9		
						4,500	585.8	− 3.8		68	3.02	SW.	15.4	9,000	
						4,750	567.7	− 5.3		70	2.74	SW.	16.0		
						5,000	550.2	− 6.8		73	2.51	SW.	16.6	10,000	
						5,250	533.0	− 8.3		76	2.30	SW.	17.2		7/10 Ci., ssw.; Few A.Cu., sw.
9:01	962.5	21.2	54	SW.	8.9	5,271	531.2	− 8.4	0.60	76	2.27	SW.	17.2	10,500	
						5,500	516.0	− 9.0		81	2.30	SW.	16.3		
						5,750	499.4	−11.7		85	1.90	SW.	15.4		
10:05	962.5	22.8	50	SSW.	10.3	5,777	497.5	−11.9	0.65	86	1.88	SW.	15.3	11,500	4/10 Ci., ssw.; Few A.Cu., sw.
						5,750	499.4	−11.7		86	1.92	SW.	15.3		
						5,500	516.0	−10.2		88	2.24	SW.	15.8		
						5,250	532.4	− 8.7		89	2.59	SW.	16.2		
						5,000	549.6	− 6.8		91	3.13	SW.	16.7		
10:56	962.5	22.0	50	SSW.	14.3	4,861	559.2	− 6.3	0.57	92	3.30	SW.	16.9	7,700	7/10 Ci.St., ssw; Few Cu., ssw.
						4,750	567.2	− 5.6		91	3.47	SW.	16.6		
						4,500	585.1	− 4.2		89	3.83	SW.	15.8		
						4,250	603.8	− 2.8		86	4.16	SW.	15.0		7/10 Ci.St., ssw.; Few Cu., ssw.
						4,000	623.2	− 1.4		84	4.57	SW.	14.2		Faint solar halo, 22° radius, from
						3,750	643.2	0.1		82	5.04	SW.	13.4	4,900	11:20 a. m. and continued at end
11:30	962.2	23.8	44	SW.	10.7	3,591	655.9	1.0	0.54	80	5.26	SW.	12.9		of flight.
						3,500	664.0	1.5		80	5.45	SW.	13.0		
						3,250	685.0	2.8		81	6.05	SW.	13.4		
						3,000	706.0	4.2		81	6.68	SW.	13.7		
						2,750	727.6	5.6		82	7.46	SSW.	14.0		
						2,500	750.0	6.9		82	8.16	SSW.	14.4	2,400	
						2,250	772.7	8.2		83	9.02	SSW.	14.7		
11:52	961.9	23.8	44	SW.	13.4	2,076	789.1	9.2	0.71	83	9.66	SSW.	14.9		
						2,000	795.5	9.7		83	9.98	SSW.	14.7	1,200	
						1,750	820.0	11.5		83	11.26	SSW.	13.9		
						1,500	845.0	13.3		82	12.52	SSW.	13.1		
P. M.															
12:20	961.6	24.1	44	SSW.	12.5	1,255	869.9	15.0	0.62	82	13.98	SSW.	12.4	0	9/10 Ci.St., ssw.; Few Cu., ssw.
						1,000	896.3	16.6		76	14.36	SSW.	12.6		
						750	923.1	18.1		71	14.75	SSW.	12.7		
12:31	961.4	23.8	45	SW.	12.5	615	937.5	19.0	2.74	68	14.94	SSW.	12.8		
12:38	961.4	25.0	42	SSW.	13.9	500	950.0	22.2		56	14.99	SSW.	13.4		9/10 Ci.St., ssw.; 1/10 Cu., ssw.
						396	961.4	25.0		42	13.31	SSW.	13.9		

May 6, 1918.

A. M.															
9:45	958.4	19.5	67	SW.	5.5	396	958.4	19.5		67	16.32	SW.	5.5		2/10 Ci., w.; 6/10 Cp., ssw.
						500	946.6	17.5		76	15.20	SSW.	4.1		
9:56	958.4	20.4	67	SSW.	5.5	577	938.3	16.1	1.88	82	15.01	SSW.	3.1		
						750	919.0	15.7		78	13.92	SSW.	3.6	0	
						1,000	891.9	15.1		72	12.36	SW.	4.4		3/10 Ci., w.; 2/10 Cu., ssw.
						1,250	866.4	14.4		65	10.66	SW.	5.2		
11:01	958.1	21.7	60	SSW.	6.0	1,348	857.0	14.2	0.25	63	10.20	SW.	5.5		
						1,500	841.6	13.1		65	9.80	SW.	5.4		4/10 Cu., ssw.
						1,750	817.0	11.3		67	8.97	SW.	5.3	1,400	
						2,000	792.4	9.5		70	8.31	WSW.	5.2	2,600	6/10 Cu., sw.
P. M.															
12:39	956.5	24.6	48	SW.	8.3	2,161	776.7	8.4	0.71	72	7.93	WSW.	5.1	2,700	
						2,250	768.5	7.9		70	7.46	WSW.	5.4		
						2,500	745.2	6.6		65	6.34	WSW.	6.1		
						2,750	723.0	5.3		60	5.35	W.	6.8		
						3,000	701.4	3.9		55	4.44	W.	7.6		
						3,250	680.4	2.6		50	3.68	WNW.	8.3		
						3,500	659.7	1.2		45	3.00	WNW.	9.1		
12:53	956.4	24.6	48	SW.	8.3	3,584	652.6	0.8	0.57	43	2.78	WNW.	9.3	5,400	
						3,500	659.7	1.3		44	2.95	WNW.	9.2		
						3,250	680.4	2.8		48	3.59	WNW.	8.9	5,000	
						3,000	701.4	4.4		51	4.27	WNW.	8.7		
						2,750	723.0	5.9		55	5.11	W.	8.4		
						2,500	745.2	7.4		58	5.97	W.	8.2		
						2,250	768.5	9.0		62	7.12	W.	7.9		
1:18	956.3	24.9	47	WSW.	8.7	2,162	776.7	9.5		63	7.48	W.	7.8	2,900	
1:23	956.2	25.1	47	WSW.	8.3	2,164	776.7	8.2	0.78	96	10.44	WSW.	9.4		
						2,000	792.4	9.5		92	10.92	WSW.	9.1		
						1,750	816.5	11.4		86	11.59	WSW.	8.5		
						1,500	840.8	13.4		80	12.30	SW.	8.0	1,470	
1:38	956.1	25.1	44	WSW.	6.4	1,408	850.0	14.1	1.18	78	12.55	SW.	7.8		7/10 Cu., sw.

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, May, 1918*—Continued.

May 6, 1918—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
						1,250	865.8	16.0	.....	71	12.91	SW.	7.8	.....	
						1,000	891.5	18.9	.....	60	13.10	SW.	7.7	.....	
2:08	956.0	26.5	40	WSW.	8.3	830	909.7	20.9	1.41	53	13.10	SW.	7.7	0	
						750	918.0	22.0	.....	50	13.22	SW.	7.8	.....	
						500	945.0	25.5	.....	42	13.71	WSW.	8.2	.....	
2:15	956.0	27.0	39	WSW.	8.3	396	956.0	27.0	.....	39	13.91	WSW.	8.3	.....	6/10 Cu., sw.

May 8, 1918.

A. M.															
8:57	963.1	22.0	57	SW.	9.8	396	963.1	22.0	.....	57	15.07	SW.	9.8	.....	Rain from 7:32 to 8:53 a. m.
						500	951.6	21.8	.....	58	15.15	SW.	11.5	.....	4/10 St.Cu., sw.; 2/10 Cu., sw.
						750	924.8	21.2	.....	59	14.86	SSW.	15.7	.....	
						1,000	898.0	20.7	.....	60	14.65	SSW.	19.9	9,500	
9:13	963.1	22.5	55	SSW.	8.9	1,006	897.7	20.7	0.21	60	14.65	SSW.	20.0	24,000	3/10 Cu., sw.
						1,250	872.5	18.8	.....	60	13.02	SSW.	17.5	.....	
						1,500	847.2	16.9	.....	61	11.74	SW.	15.0	.....	Faint thunder heard.
						1,750	823.4	15.0	.....	61	10.40	SW.	12.4	18,500	
9:46	963.1	24.1	56	SSW.	9.8	1,990	800.4	13.2	0.76	61	9.25	SW.	10.0	8,000	
						2,000	799.5	12.1	.....	61	9.20	SW.	10.0	.....	
						2,250	775.8	11.0	.....	66	8.67	SW.	10.4	8,000	
						2,500	752.5	8.8	.....	71	8.04	SW.	10.7	.....	
						2,750	730.0	6.6	.....	76	7.41	SW.	11.1	.....	
						3,000	708.8	4.5	.....	82	6.90	SW.	11.4	.....	
10:27	963.0	25.4	55	SW.	10.7	3,217	690.6	2.6	0.86	86	6.34	SW.	11.7	6,000	
						3,250	687.8	2.4	.....	86	6.24	SW.	11.8	.....	
						3,500	667.0	0.5	.....	86	5.44	SW.	12.8	6,500	
						3,750	646.7	−1.4	.....	87	4.73	WSW.	13.7	24,000	4/10 Cu., sw.
						4,000	627.0	−3.3	.....	87	4.04	WSW.	14.7	.....	Altitude of Cu. base about 3,800 m.
10:58	962.8	27.7	47	SW.	5.4	4,117	617.6	−4.2	0.79	87	3.74	WSW.	15.1	.....	
						4,000	627.0	−3.2	.....	85	3.98	WSW.	15.0	.....	
						3,750	646.7	−1.2	.....	81	4.48	WSW.	14.9	.....	
						3,500	667.0	0.9	.....	77	5.02	WSW.	14.7	.....	
						3,250	687.8	2.0	.....	73	5.15	SW.	14.6	(*)	Faint thunder heard.
						3,000	708.8	5.0	.....	70	6.10	SW.	14.4	.....	3/10 Cu., sw.
11:36	962.4	29.0	37	SSW.	11.2	2,775	728.4	6.9	0.89	66	6.57	SW.	14.3	3,500	
						2,750	730.0	7.0	.....	66	6.61	SW.	14.3	.....	
						2,500	751.8	10.1	.....	56	6.92	SW.	14.1	.....	
						2,250	774.7	11.5	.....	52	7.06	SW.	14.1	3,400	
						2,000	798.5	14.6	.....	42	6.98	SSW.	13.9		
						1,750	822.7	15.9	.....	38	6.87	SSW.	13.8	.....	
						1,500	847.0	18.1	.....	32	6.65	SSW.	13.7	.....	
P. M.															
12:04	962.0	29.3	37	SSW.	9.8	1,488	848.6	18.3	0.86	31	6.52	SSW.	13.7	1,300	
						1,250	872.5	20.3	.....	32	7.62	SSW.	13.0	.....	
						1,000	898.0	22.5	.....	34	9.27	SSW.	12.3	660	
						750	923.8	24.6	.....	35	10.83	SSW.	11.5	.....	
12:27	961.5	30.0	32	SSW.	12.1	708	928.1	25.0	1.70	35	11.09	SSW.	11.4	0	
						500	950.0	28.5	.....	33	12.84	SSW.	11.5	.....	
12:34	961.3	30.3	32	SSW.	11.6	396	961.3	30.3	.....	32	13.82	SSW.	11.6	.....	1/10 Cu., sw.

May 9, 1918.

P. M.															
12:38	941.0	28.0	27	SSW.	15.2	396	941.0	28.0	.....	27	10.21	SSW.	15.2	.....	Light haze.
						500	930.0	26.6	.....	30	10.45	SSW.	15.6	.....	
						750	904.0	23.3	.....	37	10.59	SW.	16.5	.....	
						1,000	878.0	20.0	.....	44	10.29	SW.	17.4	.....	
12:49	941.0	28.0	28	SSW.	16.5	1,040	874.0	19.5	1.32	45	10.20	SW.	17.5	5,000	
						1,250	852.8	17.0	.....	57	11.05	SW.	17.2	.....	
						1,500	828.2	13.9	.....	71	11.27	SW.	16.8	8,000	
						1,750	803.9	10.9	.....	85	11.08	SW.	16.4	.....	
1:15	941.1	27.5	33	WSW.	16.1	1,832	795.9	9.9	1.21	90	10.98	SW.	16.3	.....	
						2,000	779.7	9.2	.....	79	9.20	SW.	17.6	.....	2/10 Cu., sw.
						2,250	756.5	8.2	.....	63	6.85	SW.	19.4	6,000	
						2,500	734.0	7.1	.....	46	4.64	SW.	21.3	.....	
1:39	941.1	27.0	32	WSW.	14.8	2,598	725.3	6.7	0.42	40	3.92	SW.	22.0	.....	
						2,750	712.0	5.8	.....	39	3.60	SW.	20.8	7,500	
						3,000	690.3	4.3	.....	38	3.16	SW.	18.8	10,000	4/10 Cu., sw.
1:55	941.1	26.1	34	WSW.	13.9	3,072	684.1	3.9	0.61	38	3.07	SW.	18.2	.....	
						3,000	690.3	4.4	.....	39	3.26	SW.	18.1	.....	
						2,750	711.0	5.9	.....	45	4.18	SW.	17.8	.....	
						2,500	732.9	7.5	.....	50	5.18	SW.	17.5	7,400	
2:18	941.1	25.1	36	WSW.	9.4	2,292	751.9	8.8	−0.37	54	6.12	SW.	17.2	.....	
						2,250	755.7	8.8	.....	58	6.57	SW.	17.5	.....	
2:23	941.1	25.1	35	WSW.	17.9	2,020	777.3	8.7	0.63	79	8.89	SW.	19.2	8,800	
						2,000	779.2	8.8	.....	79	8.95	SW.	19.2	.....	
						1,750	803.3	10.4	.....	82	10.34	SSW.	19.8	.....	
2:31	941.1	25.0	35	WSW.	18.8	1,593	818.2	11.4	0.87	84	11.32	SSW.	20.2	.....	5/10 Cu., sw.
						1,500	827.7	12.2	.....	81	11.51	SSW.	20.1	4,000	
						1,250	852.5	14.4	.....	75	12.30	SW.	19.9	.....	
						1,000	877.7	16.6	.....	68	12.85	SW.	19.6	.....	
2:50	941.1	24.8	35	SW.	17.9	964	881.2	16.9	1.39	67	12.90	SW.	19.6	7,200	
						750	903.5	19.9	.....	55	12.78	SW.	17.9	.....	
						500	930.0	23.4	.....	42	12.09	SW.	16.0	6,700	
3:11	941.4	24.8	36	SW.	15.2	396	941.4	24.8	.....	36	11.27	SW.	15.2	.....	3/10 Cu., sw.; light haze.

*More than 50,000 volts.

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, May, 1918*—Continued.

May 10, 1918.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
9:11	970.4	8.7	47	n.	4.0	396	970.4	8.7	.....	47	5.29	n.	4.0	.....	1/10 Cl., w.
						500	958.3	7.4	.....	49	5.05	n.	5.5	.....	
						750	929.1	4.2	.....	54	4.46	n.	9.2	.....	
9:23	970.4	8.7	47	n.	4.5	758	928.5	4.1	1.27	54	4.42	n.	9.3	810	
						1,000	900.1	3.2	.....	46	3.54	n.	7.7	2,900	Few Cl., w.
						1,250	873.0	2.2	.....	37	2.65	nnw.	5.9	.....	
						1,500	847.0	1.2	.....	28	1.86	nnw.	4.2	5,300	
11:18	970.3	10.8	36	n.	4.2	1,683	828.4	0.5	0.39	22	1.39	nnw.	3.0	5,000	
						1,750	821.5	0.7	.....	21	1.35	nnw.	3.9	.....	
11:20	970.3	10.8	36	n.	4.0	1,920	804.4	1.2	−0.30	20	1.33	nw.	6.2	.....	
						2,000	796.3	1.0	.....	21	1.38	nw.	6.8	.....	
						2,250	772.0	0.5	.....	26	1.65	wnw.	8.6	.....	
						2,500	748.0	−0.1	.....	30	1.82	wnw.	10.5	.....	
						2,750	725.4	0.6	.....	34	1.98	wnw.	12.3	.....	
						3,000	703.4	−1.1	.....	38	2.12	w.	14.1	12,000	
11:34	970.3	11.2	32	n.	1.6	3,171	688.1	−1.5	0.23	41	2.21	w.	15.4	.....	Few Cl., w.
						3,000	703.4	−1.1	.....	39	2.17	w.	14.1	9,300	
						2,750	725.4	−0.4	.....	36	2.13	w.	12.1	.....	
						2,500	748.0	0.2	.....	34	2.11	wnw.	10.2	.....	
						2,250	772.0	0.8	.....	31	2.01	wnw.	8.3	.....	
						2,000	796.3	1.5	.....	28	1.91	wnw.	6.3	.....	
11:58	970.3	11.3	31	n.	3.6	1,903	806.1	1.7	−0.92	27	1.87	wnw.	5.6	4,500	
NOON	970.3	11.5	31	n.	3.6	1,751	821.5	0.3	0.67	23	1.44	nw.	4.9	.....	
						1,500	847.0	2.0	.....	28	1.98	nnw.	5.3	2,200	
						1,250	873.0	3.7	.....	32	2.55	nnw.	5.7	.....	1/10 Cl., w.
						1,000	900.1	5.3	.....	37	3.30	n.	6.1	920	
						750	928.6	7.0	.....	41	4.11	nne.	6.5	.....	
P. M.															
12:39	970.0	12.2	30	nne.	1.8	600	946.5	8.0	1.86	44	4.72	nne.	6.7	0	
						500	957.5	9.9	.....	39	4.76	nne.	4.9	.....	
12:45	970.0	11.8	33	nne.	3.1	396	970.0	11.8	.....	33	4.57	nne.	3.1	.....	1/10 Cl., w.

May 11, 1918.

A. M.															
9:21	966.8	12.7	37	ene.	6.7	396	966.8	12.7	.....	37	5.44	ene.	6.7	.....	Few Cl., wnw.
						500	954.4	10.8	.....	39	5.05	ene.	6.4	.....	Few Cu., n.
						750	926.0	6.3	.....	45	4.30	ne.	5.6	.....	
10:40	966.5	14.4	35	ne.	2.7	785	922.3	5.7	1.80	46	4.21	ne.	5.5	.....	
						1,000	898.2	3.8	.....	51	4.09	nne.	5.5	0	
10:54	966.5	14.9	34	nne.	1.6	1,138	883.1	2.6	0.88	55	4.05	nne.	5.5	.....	
						1,250	871.0	1.6	.....	56	3.84	nne.	5.7	.....	
						1,500	844.3	−0.6	.....	60	3.49	n.	6.1	.....	
11:09	966.5	14.8	34	n.	7.2	1,596	834.3	−1.5	1.00	61	3.29	n.	6.3	.....	
						1,500	844.3	−0.4	.....	60	3.55	n.	6.1	.....	4/10 Cu., n.
						1,250	871.0	2.3	.....	59	4.25	n.	5.6	.....	
						1,000	898.2	5.1	.....	57	5.01	n.	5.1	.....	
						750	926.0	7.8	.....	55	5.82	n.	4.6	.....	
						500	954.4	10.6	.....	53	6.77	n.	4.1	.....	
11:16	966.5	14.7	34	n.	5.8	451	960.2	11.1	6.00	53	7.00	n.	4.0	.....	
11:54	966.5	14.4	35	nne.	6.3	396	966.5	14.4	.....	35	5.74	nne.	6.3	.....	5/10 Cu., n.

May 12, 1918.

A. M.															
7:41	961.7	10.7	52	wnw.	3.1	396	961.7	10.7	.....	52	6.69	wnw.	3.1	.....	3/10 Cl., wnw.; 3/10 Cl.St., wnw.
						500	949.5	10.3	.....	52	6.52	wnw.	4.6	.....	
						750	921.5	9.4	.....	51	6.01	nw.	8.0	0	
8:03	961.8	12.9	44	nnw.	5.8	991	895.5	8.5	0.37	50	5.55	nnw.	11.4	730	
						1,000	894.5	8.4	.....	50	5.51	nnw.	11.4	.....	2/10 Cl., wnw.; 1/10 St.Cu., wnw.
						1,250	868.2	6.4	.....	51	4.90	nnw.	11.5	.....	
						1,500	842.2	4.4	.....	52	4.35	nw.	11.7	.....	
8:17	961.9	13.7	43	nnw.	5.4	1,693	822.0	2.8	0.81	53	3.96	nw.	11.8	3,900	
						1,750	816.6	2.2	.....	54	3.87	nw.	11.7	.....	2/10 Cl., wnw.; 3/10 A.Cu., wnw.
						2,000	791.3	− 0.2	.....	59	3.55	wnw.	11.5	.....	
8:33	962.0	14.3	42	nw.	6.7	2,244	767.6	− 2.6	0.98	64	3.15	wnw.	11.2	6,300	
						2,250	767.0	− 2.6	.....	64	3.15	wnw.	11.2	.....	3/10 Cl.Cu., wnw.; 3/10 Cl.St., wnw.; 2/10 A.Cu., wnw.
						2,500	743.3	− 4.6	.....	70	2.90	wnw.	11.0	8,000	
						2,750	720.3	− 6.5	.....	77	2.72	wnw.	10.8	10,000	
9:12	962.2	15.0	44	nnw.	7.2	2,956	701.1	− 8.1	0.77	82	2.52	wnw.	10.6	.....	3/10 Cl.St., wnw.; 3/10 A.Cu., wnw.; 4/10 St.Cu., wnw.
						3,000	696.7	− 8.4	.....	82	2.45	wnw.	10.8	.....	
						3,250	674.1	−10.2	.....	83	2.12	wnw.	12.1	10,500	Sprinkling rain from 9:31 to 9:35 a. m.
						3,500	652.8	−12.1	.....	84	1.81	nw.	13.4	6,000	Altitude of St.Cu. base about 4,100 m.
						3,750	632.5	−13.9	.....	86	1.57	nw.	14.7	.....	
9:43	962.6	14.1	41	n.	9.8	3,833	625.8	−14.5	0.74	86	1.49	nw.	15.1	10,300	
						3,750	632.5	−13.9	.....	86	1.57	nw.	15.1	.....	
						3,500	652.8	−12.0	.....	86	1.87	nw.	15.0	.....	
						3,250	674.1	−10.2	.....	86	2.19	nw.	15.0	.....	
						3,000	696.9	− 8.3	.....	86	2.60	nw.	14.9	8,200	
						2,750	720.3	− 6.4	.....	86	3.06	nnw.	14.8	.....	
						2,500	743.3	− 4.6	.....	86	3.57	nnw.	14.8	.....	
						2,250	767.0	− 2.7	.....	86	4.20	nnw.	14.7	.....	9/10 St.Cu., wnw.
10:10	963.0	14.7	38	n.	5.8	2,153	776.0	− 2.0	0.66	86	4.45	nnw.	14.7	5,000	
						2,000	791.3	− 1.0	.....	76	4.27	nnw.	14.9	.....	
						1,750	816.6	0.7	.....	60	3.86	n.	15.3	.....	
						1,500	842.2	2.3	.....	44	3.17	n.	15.7	.....	
10:28	963.2	15.6	40	nne.	6.3	1,430	849.7	2.8	0.93	39	2.91	n.	15.8	3,200	
						1,250	869.0	4.5	.....	39	3.28	n.	15.2	.....	7/10 St.Cu., wnw.
						1,000	896.3	6.9	.....	40	3.98	n.	14.3	780	
						750	923.8	9.3	.....	41	4.81	n.	13.4	.....	
10:52	963.7	15.5	37	nne.	6.3	634	936.7	10.4	2.27	41	5.17	n.	13.0	0	3/10 A.Cu., wnw.; Few Cu., nnw.
						500	951.8	13.4	.....	39	5.99	nne.	8.7	.....	
10:57	963.8	15.8	38	nne.	5.4	396	963.8	15.8	.....	38	6.82	nne.	5.4	.....	

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, May, 1918*—Continued.

May 14, 1918.

Time.	Surface. Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Electric potential.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
7:42	970.9	14.3	67	sse.	7.6	396	970.9	14.3	.....	67	10.92	sse.	7.6	.....	Cloudless.
						500	958.3	13.2	.....	70	10.62	sse.	11.8	.....	
7:45	970.9	14.1	68	s.	7.6	635	943.7	11.8	1.05	75	10.38	s.	17.2	.....	
						750	931.0	15.0	.....	57	9.72	s.	15.9	.....	
7:48	970.9	14.1	68	s.	8.0	782	927.2	15.9	−2.79	52	9.40	s.	15.5	565	
						1,000	904.2	16.5	.....	37	7.51	ssw.	17.3	.....	
7:55	970.9	14.4	68	s.	6.7	1,027	901.0	16.6	−0.29	35	6.61	ssw.	17.5	.....	
						1,250	878.0	15.9	.....	34	6.14	ssw.	17.6	2,100	
8:06	970.9	15.2	65	s.	6.7	1,402	862.2	15.4	0.32	33	5.78	ssw.	17.7	.....	
						1,500	852.5	14.6	.....	35	5.82	ssw.	16.7	.....	Cloudless.
						1,750	827.6	12.5	.....	41	5.94	sw.	14.0	3,700	
						2,000	803.2	10.4	.....	47	5.93	wsw.	11.3	.....	
8:29	970.9	17.2	58	s.	6.7	2,043	799.0	10.0	0.84	48	5.89	wsw.	10.8	.....	
						2,250	779.4	8.2	.....	49	5.33	wsw.	10.4	4,400	
9:27	970.8	19.4	52	s.	6.3	2,381	766.9	7.1	0.86	52	5.25	wsw.	10.1	.....	
						2,500	756.0	6.1	.....	53	4.99	wsw.	10.3	.....	Few St.Cu., wsw.
						2,750	733.3	4.1	.....	55	4.50	wsw.	10.8	.....	
						3,000	711.0	2.0	.....	57	4.08	wsw.	11.3	5,900	
						3,250	689.8	0.0	.....	58	3.54	sw.	11.8	.....	
						3,500	668.8	−2.1	.....	60	3.08	sw.	12.2	.....	
9:58	970.6	19.9	52	sse.	8.9	3,737	648.8	−4.0	0.81	62	2.71	sw.	12.7	.....	
						3,500	668.8	−2.1	.....	63	3.23	sw.	12.4	.....	
						3,250	689.8	−0.1	.....	63	3.82	sw.	12.1	.....	
						3,000	711.0	1.8	.....	64	4.45	sw.	11.8	4,500	
10:17	970.5	21.4	47	sse.	7.6	2,868	723.2	2.9	1.00	64	4.82	sw.	11.6	.....	
						2,750	733.3	4.1	.....	61	5.00	sw.	11.7	.....	
						2,500	756.0	6.6	.....	55	5.36	sw.	11.9	3,000	
						2,250	779.4	9.1	.....	49	5.66	ssw.	12.0	.....	
						2,000	803.2	11.6	.....	43	5.87	ssw.	12.2	.....	1/10 St.Cu., wsw.
10:40	970.4	22.4	45	s.	8.0	1,838	819.3	13.2	0.75	39	5.92	ssw.	12.3	1,900	
						1,750	827.6	13.9	.....	37	5.88	ssw.	12.6	.....	
						1,500	852.5	15.7	.....	32	5.71	ssw.	13.3	.....	
10:55	970.3	22.3	45	s.	9.4	1,279	875.1	17.4	−0.80	27	5.36	ssw.	13.9	.....	
						1,250	878.0	17.2	.....	29	5.69	ssw.	13.8	950	
11:00	970.3	22.1	46	sse.	7.2	1,015	902.7	15.3	0.82	45	7.82	s.	12.6	.....	
						1,000	904.2	15.4	.....	46	8.05	s.	12.6	.....	
11:07	970.2	22.7	43	sse.	8.0	772	928.8	17.3	1.52	57	11.26	sse.	12.6	0	
						750	931.0	17.6	.....	56	11.27	sse.	12.3	.....	
						500	958.0	21.4	.....	49	12.49	s.	8.7	.....	
11:12	970.1	23.0	46	s.	7.2	396	970.1	23.0	.....	46	12.93	s.	7.2	.....	3/10 St.Cu., wsw.

May 15, 1918.

A. M.															
7:46	967.0	22.5	36	ssw.	13.4	396	967.0	22.5	.....	36	9.81	ssw.	13.4	.....	4/10 Cl.St., w.; 2/10 A.Cu., w.; 2/10 St.Cu., wsw.
						500	955.1	21.7	.....	36	9.35	ssw.	17.9	.....	
						750	928.0	20.1	.....	37	8.71	ssw.	26.5	.....	
7:53	966.9	22.9	35	ssw.	17.0	902	911.7	18.5	0.79	37	7.88	ssw.	35.2	.....	
						1,000	901.4	18.4	.....	35	7.41	ssw.	36.0	.....	
						1,250	875.5	18.1	.....	31	6.44	ssw.	37.9	.....	
8:10	966.8	22.9	34	ssw.	15.2	1,342	866.0	18.0	0.11	30	6.19	ssw.	38.6	0	
						1,500	850.1	16.9	.....	28	5.39	ssw.	36.0	.....	
						1,750	825.8	15.1	.....	26	4.46	ssw.	32.0	.....	
						2,000	801.5	13.3	.....	24	3.66	sw.	28.0	.....	
						2,250	777.5	11.5	.....	21	2.85	sw.	24.0	680	
8:33	966.5	23.7	32	ssw.	15.6	2,271	775.8	11.3	0.74	21	2.81	sw.	23.6	.....	
						2,250	777.5	11.5	.....	21	2.85	sw.	23.6	.....	
						2,000	801.5	13.4	.....	21	3.23	sw.	23.8	.....	
						1,750	825.8	15.3	.....	21	3.65	sw.	24.0	.....	
						1,500	850.1	17.2	.....	21	4.12	sw.	24.2	.....	
8:48	966.3	23.9	30	ssw.	13.4	1,356	864.4	18.3	0.62	21	4.42	sw.	24.3	.....	
						1,250	875.5	19.0	.....	23	5.05	sw.	23.1	.....	
						1,000	901.4	20.5	.....	28	6.75	ssw.	20.4	18,000	4/10 Cl.St., w.; 4/10 St.Cu., wsw.
						750	928.0	22.1	.....	32	8.51	ssw.	18.6	.....	
9:26	966.2	25.9	27	sw.	20.6	716	931.5	22.3	1.16	33	8.89	ssw.	17.2	.....	
						500	954.7	24.8	.....	28	8.87	sw.	16.1	.....	4/10 Cl.St., w.; 4/10 St.Cu., w.
9:41	966.2	26.0	26	sw.	15.6	396	966.2	26.0	.....	26	8.74	sw.	15.6	.....	

May 16, 1918.

A. M.															
11:04	962.1	27.3	35	s.	20.6	396	962.1	27.3	.....	35	12.70	s.	20.6	.....	6/10 Ci., w.; 2/10 St.Cu., ssw.
						500	950.5	25.8	.....	35	11.63	s.	20.8	.....	
						750	923.2	22.1	.....	37	9.84	s.	21.4	.....	
						1,000	897.2	18.5	.....	38	8.09	s.	22.0	.....	
11:12	962.0	27.3	35	s.	19.7	1,038	893.4	17.9	1.46	38	7.79	s.	22.1	0	
						1,250	871.5	16.6	.....	36	6.80	s.	22.6	.....	
						1,500	846.2	15.0	.....	33	5.63	s.	23.2	.....	
11:18	962.0	28.0	34	s.	18.8	1,630	833.4	14.2	0.62	32	5.18	s.	23.5	1,470	
11:20	962.0	28.2	34	s.	15.2	1,696	827.0	15.5	−1.97	31	5.46	s.	29.0	.....	
						1,750	821.6	15.3	.....	30	5.21	s.	28.7	.....	
						2,000	797.8	14.2	.....	26	4.21	s.	27.5	2,500	
						2,250	774.7	13.1	.....	22	3.32	ssw.	26.3	0	
						2,500	751.8	12.1	.....	18	2.54	ssw.	25.1	4,500	
11:57	961.8	29.2	29	s.	17.0	2,633	739.8	11.5	0.53	16	2.17	ssw.	24.5	.....	
						2,500	751.8	12.3	.....	16	2.29	ssw.	23.8	.....	
						2,250	774.7	13.9	.....	16	2.54	ssw.	22.4	2,800	
P. M.															
12:26	961.5	29.9	28	s.	19.7	2,126	785.9	14.7	0.09	16	2.68	ssw.	21.7	.....	
						2,000	797.8	14.8	.....	19	3.20	ssw.	22.5	4,000	
						1,750	821.6	15.0	.....	24	4.09	s.	24.0	.....	
12:42	961.3	30.4	27	s.	20.6	1,549	841.4	15.2	1.10	29	5.01	s.	25.2	.....	5/10 Ci., w.; 2/10 St.Cu., ssw.
						1,500	846.2	15.7	.....	29	5.17	s.	25.2	2,200	

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, May, 1918*—Continued.

May 16, 1918—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
						1,250	871.5	18.5	.....	30	6.39	s.	24.7	.....	
						1,000	897.2	21.2	.....	30	7.55	s.	24.2	500	
						750	923.2	24.0	.....	31	9.25	s.	23.8	.....	
1:09	961.0	30.2	27	s.	19.7	640	934.7	25.2	2.30	31	9.94	s.	23.6	.....	
						500	949.3	28.4	.....	28	10.84	s.	18.8	0	
1:20	960.9	30.8	26	s.	15.2	396	960.9	30.8	.....	26	11.55	s.	15.2	.....	2/10 Cl., w.; 2/10 St.Cu., ssw.

May 17 1918 (No. 1).

A. M.															
9:25	964.2	21.9	79	s.	7.2	396	964.2	21.9	.....	79	20.76	s.	7.2	.....	10/10 St.Cu., sw.
						500	952.5	20.7	.....	81	19.78	s.	8.9	.....	
9:36	964.2	22.4	79	s.	6.3	700	930.9	18.3	1.18	86	18.09	s.	12.2	0	7/10 St.Cu., sw.
						750	925.5	18.1	.....	85	17.65	s.	11.4	.....	
						1,000	898.8	17.4	.....	80	15.90	ssw.	7.5	.....	
10:29	964.2	24.2	66	s.	6.7	1,027	896.3	17.3	0.63	79	15.60	ssw.	7.1	0	
						1,000	898.8	17.6	.....	78	15.77	ssw.	7.0	.....	10/10 St.Cu., ssw.
						750	925.5	20.0	.....	71	16.60	s.	6.0	.....	
11:09	964.2	24.5	60	s.	3.1	518	950.8	22.2	1.89	64	17.13	s.	5.1	0	
						500	952.5	22.5	.....	63	17.17	s.	4.8	.....	
11:14	964.2	21.5	60	s.	3.1	396	964.2	24.5	.....	60	18.45	s.	3.1	.....	10/10 St.Cu., ssw.

May 17, 1918 (No. 2).

P. M.															
6:37	964.5	18.7	84	ssw.	4.5	396	964.5	18.7	.....	84	18.12	ssw.	4.5	.....	8/10 St.Cu., w.
						500	953.0	18.6	.....	78	16.72	wsw.	5.4	.....	
7:24	964.6	18.2	88	nnw.	3.6	641	937.5	18.4	0.12	69	14.60	wnw.	6.7	.....	7/10 St.Cu., sw.
						750	926.0	17.8	.....	73	14.88	wsw.	6.8	0	5/10 St.Cu., ssw.
8:46	965.1	16.5	95	ene.	2.2	950	904.6	16.6	0.58	79	14.92	sse.	7.1	615	4/10 St.Cu., ssw.; 3/10 St., ene.
						1,000	899.0	16.4	.....	79	14.73	sse.	6.9	565	
						1,250	873.0	15.2	.....	77	13.30	s.	6.2	.....	Altitude of St. base about 950 m.;
9:06	965.2	16.1	97	ese.	4.0	1,450	852.8	14.3	0.42	75	12.22	s.	5.6	.....	2/10 St.Cu., ssw.
						1,250	873.0	15.1	.....	77	13.21	s.	7.2	.....	
						1,000	899.0	16.0	.....	78	14.00	sse.	9.2	.....	
9:22	965.3	16.2	96	e.	3.6	918	907.9	16.3	0.00	79	14.64	sse.	9.9	0	
						750	926.0	16.3	.....	82	15.19	se.	9.8	.....	
9:30	965.4	16.2	96	ese.	4.0	496	954.1	16.3	−0.10	86	15.94	ese.	9.7	.....	
9:32	965.4	16.2	96	ese.	4.0	396	965.4	16.2	.....	96	17.68	ese.	4.0	.....	1/10 Cl., w.; few St.Cu., ssw.

May 18, 1918.

A. M.															
7:45	963.8	18.2	90	sse.	5.8	396	963.8	18.2	.....	90	18.81	sse.	5.8	.....	10/10 St.Cu., s.
						500	951.8	17.0	.....	90	17.44	s.	7.2	.....	Altitude of St.Cu. base about 750 m.
						750	924.3	14.3	.....	90	14.67	ssw.	10.6	.....	
8:00	963.8	18.4	88	s.	5.8	756	923.8	14.2	1.11	90	14.57	ssw.	10.7	0	
						1,000	897.6	17.1	.....	79	15.40	ssw.	11.8	.....	
8:14	963.7	19.0	87	ssw.	5.8	1,177	879.5	19.2	−1.19	54	12.02	ssw.	12.6	.....	
						1,250	872.0	18.8	.....	53	11.50	ssw.	12.8	705	7/10 St.Cu., ssw.
						1,500	847.1	17.4	.....	51	10.13	sw.	13.3	.....	
						1,750	822.8	16.1	.....	49	8.97	sw.	13.9	.....	
8:55	963.5	20.3	82	ssw.	6.7	1,761	821.4	16.0	0.55	49	8.91	sw.	13.9	1,300	4/10 St.Cu., ssw.
						2,000	798.8	14.1	.....	48	7.72	sw.	14.0	.....	
						2,250	775.5	12.1	.....	46	6.50	sw.	14.1	.....	
						2,500	752.9	10.2	.....	45	5.60	sw.	14.2	2,300	
						2,750	730.7	8.2	.....	44	4.78	sw.	14.3	.....	2/10 St.Cu., ssw.
9:27	963.1	21.7	78	s.	4.9	2,942	713.3	6.7	0.69	43	4.22	sw.	14.3	2,800	
						3,000	708.4	6.3	.....	41	3.92	sw.	14.2	.....	
						3,250	687.0	4.6	.....	33	2.80	sw.	13.8	.....	Few St. Cu., ssw.
10:00	962.5	23.1	72	s.	4.9	3,481	667.3	3.1	0.67	25	1.91	sw.	13.4	3,800	
						3,500	666.0	3.0	.....	26	1.97	sw.	13.5	.....	
						3,750	645.8	1.2	.....	27	1.80	sw.	14.4	.....	Few Cu., s.
						4,000	626.0	−0.6	.....	30	1.74	sw.	15.2	5,200	
						4,250	607.3	−2.4	.....	32	1.60	sw.	16.1	.....	
10:32	962.0	24.5	66	s.	5.8	4,355	599.1	−3.2	0.75	33	1.54	sw.	16.5	.....	
						4,250	607.3	−2.4	.....	32	1.60	sw.	16.4	.....	
						4,000	626.0	−0.4	.....	30	1.77	sw.	16.1	4,400	
						3,750	645.5	1.5	.....	28	1.91	sw.	15.8	.....	
10:57	961.5	25.2	64	s.	4.9	3,665	652.3	2.2	0.76	27	1.93	sw.	15.7	.....	
						3,500	665.5	3.5	.....	28	2.20	sw.	16.1	.....	
						3,250	686.0	5.4	.....	29	2.60	sw.	16.7	3,700	
						3,000	707.0	7.3	.....	30	3.07	sw.	17.4	.....	
						2,750	728.9	9.2	.....	31	3.61	sw.	18.0	.....	
11:20	961.1	25.7	64	s.	5.4	2,586	743.7	10.4	0.70	32	4.04	sw.	18.4	2,900	
						2,500	751.0	11.0	.....	34	4.46	sw.	18.2	.....	
						2,250	773.5	12.7	.....	39	5.73	sw.	17.4	.....	
						2,000	796.8	14.5	.....	45	7.43	sw.	16.7	.....	
11:36	960.8	25.7	64	s.	8.5	1,812	815.0	15.8	0.83	49	8.80	sw.	16.2	1,500	
						1,750	821.0	16.3	.....	49	9.08	sw.	15.7	.....	
						1,500	845.5	18.4	.....	49	10.37	ssw.	13.5	.....	
11:44	960.7	25.8	62	s.	7.2	1,402	855.1	19.2	−0.58	49	10.90	ssw.	12.6	.....	
						1,250	870.5	18.3	.....	60	12.62	ssw.	12.4	.....	
11:48	960.6	25.8	62	s.	8.0	1,143	881.1	17.7	0.71	68	13.77	ssw.	12.2	.....	
						1,000	895.8	18.7	.....	67	14.45	ssw.	12.4	0	
						750	922.3	20.5	.....	66	15.92	s.	12.7	.....	
P. M.															
12:09	960.4	25.8	62	s.	8.0	720	925.5	20.7	1.70	66	16.12	s.	12.7	.....	
						500	948.8	24.4	.....	63	19.26	s.	9.2	.....	
12:15	960.4	26.2	62	s.	7.6	396	960.4	26.2	.....	62	21.09	s.	7.6	.....	Few Cl., w.; 1/10 Cu., s.

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, May, 1918*—Continued.

May 19, 1918.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*volts.*	
7:39	957.1	22.4	74	wnw.	8.0	396	957.1	22.4	.....	74	20.05	wnw.	8.0	.....	Few Cu., wsw.
						500	945.6	21.8	.....	64	16.72	wnw.	9.3	.....	
						750	919.0	20.4	.....	40	9.59	nw.	12.4	.....	
7:48	957.4	22.2	53	wnw.	7.2	796	914.1	20.1	0.58	35	8.24	nw.	13.0	.....	
						1,000	892.8	19.0	.....	33	7.25	nw.	12.6	.....	
						1,250	867.2	17.9	.....	30	6.15	nw.	12.1	0	
						1,500	842.5	16.7	.....	27	5.13	wnw.	11.6	.....	
						1,750	818.0	15.5	.....	25	4.40	wnw.	11.1	.....	
8:12	957.8	21.8	46	wnw.	8.9	1,807	812.5	15.2	0.48	24	4.14	wnw.	11.0	860	
						2,000	794.0	13.4	.....	25	3.84	wnw.	12.5	.....	
						2,250	771.0	12.1	.....	26	3.67	wnw.	13.7	.....	Cloudless.
8:41	958.2	21.6	41	nw.	8.9	2,490	749.1	9.0	0.91	29	3.33	wnw.	16.4	1,500	
						2,500	748.2	8.9	.....	29	3.31	wnw.	16.4	.....	
						2,750	726.0	6.7	.....	33	3.24	wnw.	15.1	.....	
						3,000	704.4	4.4	.....	37	3.10	wnw.	13.9	2,800	
						3,250	683.0	2.2	.....	41	2.94	w.	12.7	.....	
9:05	958.5	21.8	47	nw.	8.0	3,425	668.3	0.6	0.90	44	2.81	w.	11.8	3,000	
						3,500	661.9	0.1	.....	44	2.71	w.	12.6	.....	
						3,750	641.3	−1.8	.....	44	2.31	w.	15.1	4,100	Cloudless.
						4,000	621.5	−3.6	.....	44	1.99	w.	17.7	.....	
						4,250	602.3	−5.4	.....	45	1.75	w.	20.2	.....	
						4,500	583.8	−7.2	.....	45	1.49	w.	22.8	.....	
						4,750	565.3	−9.0	.....	45	1.28	w.	25.3	6,800	
10:05	959.5	21.8	49	nw.	6.3	4,826	559.6	−9.6	0.70	45	1.21	w.	26.1	.....	
						4,750	655.3	−9.1	.....	45	1.26	w.	25.6	.....	
						4,500	583.8	−7.4	.....	44	1.43	w.	24.0	.....	
						4,250	602.3	−5.7	.....	44	1.66	w.	22.4	.....	
						4,000	621.5	−4.1	.....	43	1.86	w.	20.7	.....	
10:50	960.2	21.8	51	nnw.	5.8	3,781	638.5	−2.6	0.91	43	2.12	w.	19.3	.....	
						3,750	641.3	−2.3	.....	43	2.17	w.	19.4	.....	
						3,500	661.9	−0.1	.....	39	2.36	w.	20.1	.....	
						3,250	683.0	2.2	.....	36	2.58	w.	20.9	.....	
						3,000	704.4	4.5	.....	32	2.69	wsw.	21.6	.....	
						2,750	725.8	6.7	.....	29	2.84	wsw.	22.3	.....	Few Cu., nw.
11:17	960.5	22.0	47	nnw.	5.4	2,621	736.9	7.9	0.24	27	2.88	wsw.	22.7	3,000	
						2,500	748.0	8.2	.....	29	3.15	wsw.	21.6	2,300	
						2,250	771.0	8.8	.....	32	3.63	w.	19.4	.....	
						2,000	794.0	9.4	.....	35	4.13	wnw.	17.2	.....	
11:47	960.7	22.8	47	nnw.	6.7	1,799	814.0	9.9	0.51	38	4.64	nw.	15.4	1,200	
						1,750	818.6	10.1	.....	40	4.94	nw.	15.2	.....	
						1,500	843.7	11.4	.....	50	6.74	nw.	14.2	.....	
						1,250	869.0	12.7	.....	61	8.96	nw.	13.2	.....	
NOON	960.8	23.0	44	nnw.	5.4	1,228	871.7	12.8	1.42	62	9.16	nw.	13.1	0	
						1,000	895.5	15.2	.....	58	10.02	nnw.	12.3	.....	
12:22	961.1	23.2	42	nnw.	5.4	798	917.4	17.3	1.48	54	10.66	nnw.	11.5	.....	
						750	922.4	18.0	.....	53	10.94	nnw.	10.8	.....	
						500	948.5	21.7	.....	46	11.94	n.	7.0	.....	
12:28	961.1	23.2	43	n.	5.4	396	961.1	23.2	.....	43	12.23	n.	5.4	.....	Few Cu., nw.

May 20, 1918 (No. 1).

A. M.															
7:49	970.9	14.6	61	ese.	8.9	396	970.9	14.6	.....	61	10.14	ese.	8.9	.....	6/10 Cl.St., wsw.
						500	958.9	13.4	.....	61	9.38	ese.	10.8	.....	
7:58	970.9	14.2	64	ese.	8.5	741	931.7	10.6	1.16	61	7.80	ese.	15.1	1,200	
						750	930.8	10.6	.....	61	7.80	ese.	15.0	.....	
						1,000	903.6	10.0	.....	58	7.12	ese.	13.4	.....	
						1,250	877.0	9.5	.....	56	6.65	ese.	11.8	2,600	8/10 Cl.St., wsw.; 1/10 St. Cu., sw.
						1,500	851.4	8.9	.....	53	6.04	ese.	10.2	.....	
						1,750	826.0	8.4	.....	51	5.62	ese.	8.5	3,200	
						2,000	801.0	7.8	.....	48	5.08	ese.	6.9	4,500	
9:15	970.9	16.3	53	ese.	8.5	2,108	790.5	7.6	0.22	47	4.91	ese.	6.2	7,000	
						2,250	776.7	6.9	.....	48	4.78	se.	6.5	.....	
						2,500	753.0	5.5	.....	51	4.61	se.	7.1	.....	
						2,750	730.0	4.2	.....	53	4.37	sse.	7.6	.....	
						3,000	708.3	2.9	.....	55	4.14	s.	8.2	.....	
						3,250	687.5	1.6	.....	58	3.98	ssw.	8.7	8,700	
9:45	970.9	18.1	48	ese.	8.0	3,481	668.6	0.4	0.52	60	3.77	sw.	9.2	9,500	
						3,500	667.0	0.2	.....	60	3.72	sw.	9.3	.....	
						3,750	646.7	−1.9	.....	64	3.34	sw.	10.9	10,800	
						4,000	626.8	−4.1	.....	69	2.99	sw.	12.5	.....	8/10 Cl.St., wsw.; 1/10 St.Cu., sw.
						4,250	607.6	−6.2	.....	73	2.64	sw.	14.1	11,500	
						4,500	588.2	−8.3	.....	77	2.33	sw.	15.6	11,800	
10:45	970.7	19.6	42	ese.	8.0	4,621	579.0	−9.4	0.83	79	2.16	sw.	16.4	.....	
						4,500	588.2	−8.4	.....	76	2.27	sw.	15.6	.....	
						4,250	607.6	−6.4	.....	69	2.46	sw.	13.8	.....	
						4,000	626.8	−4.4	.....	63	2.66	sw.	12.1	.....	
						3,750	646.7	−2.4	.....	57	2.85	sw.	10.4	9,500	
11:15	970.4	20.7	44	se.	8.0	3,569	661.2	−1.0	0.76	52	2.92	sw.	9.1	.....	
						3,500	667.0	−0.5	.....	51	2.99	sw.	9.7	.....	4/10 Cl.St., wsw.; few St. Cu., sw.
						3,250	687.5	1.4	.....	49	3.31	sw.	11.7	9,000	
						3,000	709.0	3.3	.....	46	3.56	sw.	13.7	.....	
						2,750	731.2	5.2	.....	44	3.89	sw.	15.7	.....	
11:43	969.9	21.7	37	sse.	8.9	2,589	746.2	6.4	0.52	42	4.04	sw.	17.0	7,000	
						2,500	754.4	6.9	.....	41	4.08	sw.	16.7	.....	
						2,250	777.7	8.2	.....	37	4.02	ssw.	15.9	.....	
						2,000	801.0	9.4	.....	34	4.01	s.	15.1	.....	
						1,750	826.0	10.7	.....	30	3.86	sse.	14.2	3,400	
P. M.															
12:05	969.5	22.4	35	se.	10.3	1,584	842.4	11.6	−1.61	28	3.82	sse.	13.7	.....	
						1,500	851.4	10.3	.....	37	4.64	sse.	12.0	.....	
12:07	969.5	22.5	35	se.	10.3	1,460	855.2	9.6	1.14	42	5.02	se.	11.2	.....	
						1,250	877.0	12.0	.....	42	5.89	se.	11.5	1,800	
						1,000	903.6	14.8	.....	42	7.07	se.	11.9	.....	
						750	930.8	17.7	.....	42	8.50	se.	12.2	.....	
12:31	969.2	23.0	32	se.	8.9	707	935.0	18.2	1.67	42	8.78	se.	12.3	0	
						500	957.3	21.7	.....	35	9.09	se.	9.8	.....	
12:37	969.2	23.4	31	se.	8.5	396	969.2	23.4	.....	31	8.92	se.	8.5	.....	3/10 Cl.St., wsw.

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, May, 1918*—Continued.

May 20, 1918 (No. 2).

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Electric potential.	Remarks.
P. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*volts.*	
1:28	968.4	24.0	29	se.	9.8	396	968.4	24.0		29	8.65	se.	9.8		4/10 Ci.St., wsw.
						500	957.0	22.4		30	8.13	se.	11.2		
1:38	968.3	25.5	29	sse.	10.7	742	930.4	18.6	1.56	31	6.64	se.	14.6		
						750	929.8	18.5		31	6.60	se.	14.6		
						1,000	903.0	16.4		32	5.97	se.	15.7	0	
1:58	967.9	25.1	28	se.	8.0	1,250	876.4	14.3		33	5.38	se.	16.8		7/10 Ci.St., wsw.
						1,480	852.4	12.3	0.85	34	4.87	se.	17.8		
						1,500	850.5	12.2		34	4.83	se.	18.0		
						1,750	825.0	10.6		34	4.35	sse.	20.1	3,000	
2:20	967.3	24.6	29	sse.	8.9	2,000	800.4	9.0		34	3.90	s.	22.3		
						2,161	784.9	8.0	0.63	34	3.65	s.	23.7	3,300	
						2,250	776.5	7.4		37	3.81	s.	23.5		
						2,500	753.3	6.2		44	4.17	s.	23.1	3,400	
2:49	966.5	26.2	28	ese.	10.3	2,750	730.8	4.1		55	4.50	s.	22.4		3/10 Ci.St., wsw.; 1/10 S .Cu., s.
						2,855	721.3	3.4	0.75	59	4.60	s.	22.2	3,600	
						2,750	730.8	4.3		56	4.65	s.	22.3		
						2,500	753.3	6.4		49	4.71	s.	22.5		
						2,250	776.5	8.5		43	4.77	sse.	22.7	3,000	1/10 Ci.St., wsw.; 1/10 St.Cu., s.
						2,000	800.4	10.6		36	4.60	sse.	22.8		
3:43	966.0	26.2	30	ese.	14.8	1,920	808.1	11.3	0.82	34	4.55	sse.	22.9	2,500	
						1,750	825.0	12.7		35	5.14	sse.	21.8		
						1,500	849.6	14.7		37	6.19	sse.	20.1		
						1,250	875.0	16.8		39	7.46	se.	18.5		
4:10	965.8	25.8	30	se.	9.8	1,030	897.6	18.6	0.71	40	8.57	se.	17.0		
						1,000	901.0	18.8		40	8.68	se.	17.0		
4:23	965.6	25.7	29	se.	13.9	750	927.1	20.6	1.58	35	8.49	se.	18.5	0	
						500	954.5	24.6		31	9.59	se.	14.3		
4:28	965.6	26.2	29	se.	12.5	396	965.6	26.2		29	9.87	se.	12.5		Few Ci., wsw.; few St.Cu., s.

May 20, 1918 (No. 3).

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Electric potential.	Remarks.
P. M.															
5:17	965.1	25.4	33	se.	10.3	396	965.1	25.4		33	10.71	se.	10.3		1/10 Ci.St., wsw.
						500	954.0	24.3		34	10.33	se.	12.0		
						750	926.9	21.7		37	9.61	se.	16.2		
5:23	965.0	25.3	34	se.	10.7	798	921.5	21.2	1.04	37	9.32	se.	17.0		
						1,000	900.2	19.1		41	9.07	se.	17.9		
						1,250	874.6	15.6		45	7.97	se.	19.0	0	Few Ci., wsw.; few St.Cu., s.
						1,500	849.4	14.1		50	8.04	se.	20.1		
5:44	964.9	24.8	37	se.	10.3	1,713	827.4	11.9	1.02	54	7.52	se.	21.1	1,600	
						1,750	824.4	11.7		54	7.42	se.	21.2		
						2,000	799.7	10.5		57	7.24	sse.	21.6		
						2,250	775.8	9.2		60	6.98	sse.	22.0	3,200	
						2,500	752.5	8.0		63	6.76	s.	22.4		
6:11	964.8	24.4	39	se.	9.4	2,720	732.9	6.9	0.50	65	6.47	s.	22.8	4,400	
						2,750	730.1	6.6		64	6.24	s.	22.9		Few Ci., wsw.; 1/10 St.Cu., s.
						3,000	708.2	4.4		59	4.94	s.	23.4		
6:40	964.8	23.7	43	sse.	10.3	3,245	686.7	2.3	0.82	54	3.89	s.	23.9	6,000	
						3,000	708.2	4.1		59	4.83	s.	24.1		2/10 Ci.St., wsw.; 1/10 St.Cu., s.
						2,750	730.1	6.0		64	5.98	s.	24.3		
7:07	964.8	23.0	47	sse.	11.6	2,646	739.0	6.8	0.96	66	6.52	s.	24.4	5,000	
						2,500	752.0	8.2		66	7.17	s.	24.8		
7:18	964.7	22.9	47	se.	12.5	2,375	763.4	9.4	−0.65	65	7.66	s.	25.2		
						2,250	774.8	8.6		73	8.15	s.	24.8		
7:25	964.7	22.6	48	se.	9.4	2,207	778.7	8.3	0.54	76	8.32	s.	24.7	4,000	
						2,000	798.9	9.4		74	8.72	sse.	25.2		
						1,750	823.7	10.8		72	9.32	sse.	25.9		
7:41	964.6	22.5	48	se.	10.3	1,574	840.2	11.7	0.87	70	9.62	se.	26.3	1,900	
						1,500	848.2	12.3		69	9.87	se.	26.2		3/10 Ci.St., wsw.; 3/10 St.Cu., s.
						1,250	873.3	14.5		64	10.57	se.	25.7		
						1,000	899.0	16.7		59	11.21	se.	25.2	505	
						750	925.9	18.8		54	11.72	se.	24.7		
8:12	964.6	21.9	53	se.	10.3	744	926.5	18.9	0.78	54	11.79	se.	24.7	0	
						500	953.0	20.8		54	13.27	se.	15.2		
8:20	964.6	21.6	54	se.	11.2	396	964.6	21.6		54	13.93	se.	11.2		3/10 Ci.St., wsw.; 4/10 St.Cu., s.

May 20, 1918 (No. 4).

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Electric potential.	Remarks.
P. M.															
9:09	964.8	21.1	57	se.	10.3	396	964.8	21.1		57	14.27	se.	10.3		3/10 Ci.St., wsw.; 3/10 St.Cu., s.
						500	952.9	19.9		58	13.48	se.	17.0		
9:17	964.8	21.1	57	se.	11.6	668	934.8	17.9	1.18	60	12.31	se.	27.7	0	
						750	925.9	17.5		62	12.40	se.	27.8		
						1,000	899.1	16.4		66	12.31	se.	28.1	590	
						1,250	873.2	15.3		71	12.34	sse.	28.3		
9:37	964.8	20.8	60	se.	12.1	1,385	859.5	14.7	0.45	74	12.38	sse.	28.5		
						1,500	847.4	13.7		78	12.23	sse.	27.8	2,000	4/10 A.St., wsw.; 2/10 St.Cu., s.
9:55	964.8	20.5	60	se.	13.0	1,624	835.4	12.7	0.84	82	12.05	sse.	27.0	2,900	
						1,750	822.7	12.1		79	11.15	sse.	27.0		
						2,000	798.7	10.8		74	9.58	s.	26.9	4,000	Thunder faintly heard to wsw. at 10:19 p. m.
10:20	964.6	20.1	64	sse.	13.0	2,111	788.1	10.3	0.67	71	8.90	s.	26.9		5/10 A.St., wsw.; 1/10 St.Cu., ssw.
						2,000	798.7	11.2		72	9.58	s.	26.2	5,700	6/10 A.St., wsw.; 4/10 St.Cu., sw.
						1,750	822.7	13.3		73	11.15	ssw.	24.6	5,000	Sprinkling rain began 10:39 p. m. and continued.
11:16	964.0	19.4	68	sse.	13.0	1,540	843.4	15.1	0.87	74	12.70	ssw.	23.2	17,000	3/10 A.St., wsw.; 6/10 St.Cu., sw.
						1,500	847.4	15.4		70	12.25	ssw.	22.9		
11:29	963.9	19.3	71	sse.	11.6	1,379	859.5	16.5		58	10.89	ssw.	21.9		Thunderstorm in the distance to the w. and sw. of station. Head kite broke away at 11:29 p. m.

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, May, 1918*—Continued.

May 21, 1918.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
10:17	958.6	23.0	84	sse.	7.6	396	958.6	23.0	.....	84	23.60	sse.	7.6	.....	3/10 St.Cu., sse.; 1/10 St., sse.
						500	947.2	21.9	.....	87	22.86	sse.	9.4	.....	
10:26	958.6	24.0	80	s.	9.8	683	927.6	19.9	1.08	92	21.38	sse.	12.5	0	Altitude of St. clouds about 700 m.
						750	920.3	19.3	.....	92	20.60	sse.	12.8	.....	
						1,000	893.4	17.2	.....	92	18.05	s.	13.9	615	4/10 St.Cu., s.; 3/10 St., sse.
						1,250	867.5	14.9	.....	91	15.42	s.	15.1	.....	
						1,500	842.5	12.7	.....	91	13.37	ssw.	16.2	1,500	
10:53	958.4	24.1	81	sse.	7.2	1,660	826.8	11.3	0.88	91	12.18	ssw.	16.9	.....	
						1,750	818.0	12.0	.....	77	10.81	ssw.	18.2	.....	
11:00	958.4	24.8	80	s.	8.5	1,989	795.2	14.0	−0.82	38	6.07	sw.	21.8	2,300	
						2,000	793.8	13.9	.....	38	6.03	sw.	21.8	.....	
						2,250	770.6	11.8	.....	38	5.26	sw.	21.7	3,000	
						2,500	748.0	9.6	.....	38	4.54	sw.	21.6	.....	
						2,750	726.3	7.5	.....	38	3.94	sw.	21.5	3,300	
						3,000	705.0	5.3	.....	38	3.39	sw.	21.4	.....	
11:47	958.6	26.6	53	ssw.	13.4	3,050	700.9	4.9	0.90	38	3.29	sw.	21.4	6,500	3/10 Cu., sw.
						3,000	705.0	5.4	.....	38	3.41	sw.	19.9	.....	
						2,750	727.0	7.7	.....	41	4.31	sw.	18.2	.....	
						2,500	749.5	10.1	.....	43	5.31	wsw.	15.5	4,300	
P. M.															
12:29	959.0	25.1	52	wsw.	10.7	2,337	764.4	11.6	0.68	44	6.01	wsw.	13.8	.....	
						2,250	772.5	12.2	.....	43	6.11	wsw.	13.3	.....	
						2,000	795.5	13.9	.....	42	6.67	wsw.	12.0	.....	
						1,750	819.0	15.6	.....	41	7.27	w.	10.7	2,300	
						1,500	843.6	17.3	.....	39	7.70	w.	9.4	.....	
12:54	959.3	24.9	55	w.	9.8	1,318	862.1	18.5	−0.15	38	8.09	w.	8.4	1,300	Few Cu., sw.
						1,250	869.0	18.4	.....	47	9.95	w.	9.1	.....	
1:10	959.5	25.4	56	w.	10.3	1,051	889.7	18.1	1.13	75	15.58	wsw.	11.2	755	
						1,000	895.0	18.7	.....	73	15.75	wsw.	11.1	.....	
						750	921.5	21.5	.....	65	16.67	wsw.	10.7	.....	Few Cu.Nb. on sw. horizon.
1:21	959.5	26.2	57	w.	9.8	723	924.2	21.8	1.16	64	16.72	wsw.	10.7	0	
						500	948.3	24.4	.....	56	17.12	w.	10.1	.....	
1:28	959.6	25.6	52	w.	9.8	396	959.6	25.6	.....	52	17.08	w.	9.8	.....	Few Cu., sw.

May 22, 1918.

A. M.															
11:10	976.5	15.4	64	ne.	5.8	396	976.5	15.4	.....	64	11.20	ne.	5.8	.....	4/10 Cl.St., w.; 2/10 St.Cu., sw.
						500	965.0	14.8	.....	67	11.28	ne.	6.0	0	6/10 Cl.St., w.; 2/10 St.Cu., sw.
P. M.															
1:18	977.0	18.0	57	ene.	3.6	678	945.1	13.9	0.53	71	11.27	ne.	6.3	.....	2/10 St.Cu., wsw.; 7/10 Cu., ne.
						750	936.9	13.2	.....	73	11.07	ne.	6.3	.....	
						1,000	909.1	10.6	.....	80	10.22	ne.	6.4	.....	2/10 St.Cu., wsw.; 3/10 Cu., ne.
						1,250	882.2	8.1	.....	87	9.40	ne.	6.5	.....	
1:30	977.0	18.0	59	ne.	3.6	1,381	868.5	6.8	0.90	91	8.99	ne.	6.5	.....	
						1,250	882.2	7.8	.....	87	9.20	ne.	6.4	.....	
						1,000	909.1	9.8	.....	80	9.70	ne.	6.2	.....	
						750	936.9	11.8	.....	72	9.96	nne.	6.0	.....	
1:38	977.0	18.3	58	ne.	4.0	603	953.4	13.0	2.42	68	10.19	nne.	5.9	.....	
						500	965.0	15.5	.....	63	11.09	nne.	4.5	.....	
1:48	977.0	18.0	57	ne.	3.1	396	977.0	18.0	.....	57	11.76	ne.	3.1	.....	5/10 Cu., ne.

May 23, 1918.

A. M.															
7:48	977.8	13.6	65	ese.	7.2	396	977.8	13.6	.....	65	10.13	ese.	7.2	.....	7/10 St.Cu., w.
						500	965.0	12.7	.....	61	8.96	ese.	10.1	.....	
						750	936.5	10.5	.....	50	6.35	ese.	17.1	.....	
8:18	977.3	14.0	61	ese.	9.4	769	934.8	10.3	0.88	49	6.14	ese.	17.6	2,300	
8:23	977.2	14.2	59	se.	9.8	915	918.4	11.8	−1.03	34	4.71	se.	18.1	.....	
						1,000	908.9	11.8	.....	29	4.01	se.	18.3	.....	
8:30	977.0	14.3	58	se.	8.5	1,170	890.7	11.7	0.04	19	2.61	se.	18.8	3,500	
						1,250	882.1	11.5	.....	25	3.39	se.	17.7	.....	6/10 Cl.St., wsw.; 3/10 St.Cu., w.
						1,500	856.1	10.8	.....	46	5.96	se.	14.1	5,500	
						1,750	830.9	10.2	.....	66	8.22	se.	10.6	.....	
8:52	976.6	14.7	55	se.	10.3	1,934	812.6	9.7	0.26	81	9.74	se.	8.0	5,800	
						2,000	805.0	9.3	.....	82	9.61	se.	8.2	6,500	3/10 Cl.St., wsw.; 6/10 A.St., wsw.
						2,250	782.0	8.0	.....	84	9.01	sse.	8.8	7,500	2/10 Cl.St., wsw.; 8/10 St.Cu., s.
						2,500	758.8	6.7	.....	86	8.44	sse.	9.4	8,000	Altitude of St.Cu. base about 2,100 m.
9:57	977.0	15.4	57	se.	9.8	2,732	737.7	5.4	0.49	88	7.89	s.	10.0	5,300	
						2,500	758.8	6.4	.....	79	7.59	s.	11.2	.....	
						2,250	782.0	7.5	.....	69	7.16	s.	12.5	5,800	
						2,000	805.8	8.6	.....	59	6.59	sse.	13.8	.....	
						1,750	830.3	9.7	.....	49	5.89	sse.	15.1	.....	
						1,500	855.5	10.8	.....	39	5.05	sse.	16.3	3,000	
10:34	976.7	15.2	59	sse.	7.6	1,412	864.9	11.2	−0.62	36	4.79	sse.	16.8	.....	
						1,250	881.8	10.2	.....	42	5.23	se.	17.7	.....	
10:40	976.6	15.2	58	se.	7.2	1,105	897.2	9.3	0.52	47	5.51	se.	18.5	1,100	
						1,000	908.6	9.8	.....	53	6.42	se.	16.4	.....	
10:57	976.4	15.4	58	sse.	7.6	776	933.2	11.0	1.16	67	8.80	sse.	12.0	0	
						750	936.0	11.3	.....	66	8.84	sse.	11.7	.....	
						500	964.1	14.2	.....	60	9.71	sse.	8.5	.....	
11:04	976.4	15.4	58	sse.	7.2	396	976.4	15.4	.....	58	10.15	sse.	7.2	.....	1/10 A.St., wsw.; 9/10 St.Cu., sse. intensely loud thunder to ssw. at 11:05 a. m.; sprinkling rain at 11:18 a. m.

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, May, 1918*—Continued.

May 24, 1918.

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Electric potential.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
6:30	964.7	18.0	98	sse.	5.4	396	964.7	18.0	.....	98	20.23	sse.	5.4	.....	10/10 St.Cu., w.
6:35	964.6	18.0	98	sse.	3.6	497	953.4	22.2	−4.16	64	17.13	s.	10.0	.....	
6:53	964.3	18.3	97	sse.	6.3	631	938.5	21.6	0.45	68	17.54	s.	8.8	0	
						750	925.5	20.8	.....	70	17.20	s.	8.7	.....	
						1,000	899.0	19.1	.....	73	16.14	ssw.	8.5	.....	7/10 Cl., wsw.; 3/10 St.Cu., w.
7:18	964.0	18.2	94	sse.	7.2	1,173	881.1	18.0	0.66	76	15.69	ssw.	8.4	.....	
						1,250	873.2	17.6	.....	76	15.30	ssw.	8.2	.....	7/10 Cl., wsw.; 3/10 Cl.St., wsw.
						1,500	848.0	16.3	.....	75	13.90	ssw.	7.6	560	
8:04	963.5	20.6	89	s.	6.7	1,685	829.6	15.3	0.53	74	12.86	ssw.	7.2	.....	
						1,750	823.3	14.9	.....	74	12.54	ssw.	7.8	.....	
						2,000	799.1	13.5	.....	74	11.45	ssw.	9.9	.....	
						2,250	776.0	12.1	.....	75	10.59	ssw.	12.0	.....	
						2,500	753.0	10.7	.....	75	9.65	ssw.	14.1	.....	
						2,750	730.9	9.3	.....	75	8.79	ssw.	16.2	.....	
						3,000	708.9	7.9	.....	76	8.09	ssw.	18.4	.....	
8:09	963.4	20.7	88	s.	6.3	3,110	699.6	7.3	0.56	76	7.77	ssw.	19.3	.....	
						3,250	687.9	8.1	.....	58	6.26	sw.	24.3	.....	
8:18	963.3	21.1	86	s.	5.8	3,357	678.8	8.7	−0.31	44	4.95	sw.	28.2	1,300	
						3,250	687.9	8.6	.....	50	5.58	sw.	25.8	.....	
						3,000	708.8	8.5	.....	65	7.22	sw.	20.3	1,000	
8:35	963.1	21.5	84	sse.	7.6	2,827	723.4	8.4	0.60	75	8.26	sw.	16.5	.....	
						2,750	730.0	8.9	.....	75	8.55	sw.	16.7	.....	
						2,500	752.0	10.4	.....	74	9.33	ssw.	17.5	.....	
						2,250	775.0	11.9	.....	74	10.31	ssw.	18.3	810	
						2,000	798.2	13.4	.....	73	11.22	ssw.	19.0	.....	
						1,750	822.4	14.9	.....	72	12.20	s.	19.8	.....	3/10 Cl., wsw.; 7/10 Cl.St., wsw.
9:06	962.7	21.8	84	s.	7.6	1,626	834.4	15.6	0.48	72	12.76	s.	20.2	0	
						1,500	846.9	16.2	.....	72	13.26	s.	20.0	.....	
						1,250	872.0	17.4	.....	73	14.51	s.	19.5	.....	
						1,000	897.8	18.6	.....	73	15.64	s.	19.1	.....	
						750	924.0	19.8	.....	74	17.09	s.	18.7	.....	
9:36	962.4	22.2	82	s.	6.7	707	928.5	20.0	0.68	74	17.30	s.	18.6	0	
						500	950.9	21.4	.....	79	20.14	s.	11.3	.....	
9:42	962.3	22.1	82	s.	7.6	396	962.3	22.1	.....	82	21.81	s.	7.6	.....	3/10 Cl., wsw.; 7/10 Cl.St., wsw.

May 25, 1918.

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Electric potential.	Remarks.
A. M.															
6:28	960.1	18.6	86	se.	7.6	396	960.1	18.6	.....	86	18.43	se.	7.6	.....	4/10 Cl.St., w.; 3/10 St.Cu., ssw.
						500	948.0	19.2	.....	81	18.02	sse.	11.3	.....	Sprinkling rain from 6:28 to 6:32 a. m. and from 6:52 to 7:05 a. m.
						750	921.3	20.7	.....	68	16.61	sw.	20.1	.....	
6:33	960.1	18.8	85	se.	7.6	780	918.2	20.9	−0.60	57	14.09	sw.	21.2	.....	
						1,000	895.3	21.2	.....	50	12.59	wsw.	23.0	.....	
6:45	960.2	18.9	81	se.	8.5	1,113	883.8	21.3	−1.20	46	11.65	wsw.	23.9	.....	
						1,250	870.0	21.0	.....	43	10.69	wsw.	23.7	0	
						1,500	845.0	20.4	.....	37	8.87	wsw.	23.4	.....	
						1,750	821.9	19.9	.....	31	7.20	sw.	23.1	5,000	
						2,000	798.0	19.3	.....	26	5.82	sw.	22.7	.....	
						2,250	774.8	18.8	.....	20	4.34	sw.	22.4	1,470	
7:26	960.4	20.6	81	se.	8.9	2,328	767.8	18.6	0.22	18	3.86	sw.	22.3	.....	3/10 Cl.St., w.; 6/10 St.Cu., sw.
						2,500	752.4	17.1	.....	20	3.90	sw.	22.2	.....	
						2,750	730.4	14.9	.....	22	3.73	sw.	22.1	1,500	
						3,000	709.3	12.7	.....	25	3.67	sw.	22.0	.....	
						3,250	688.5	10.5	.....	28	3.56	sw.	22.0	2,100	3/10 Cl.St., w.; 7/10 St.Cu., sw.
8:06	960.3	22.3	75	se.	9.4	3,384	677.5	9.3	0.81	29	3.40	sw.	21.9	.....	Weather threatening.
						3,250	688.5	10.3	.....	28	3.51	sw.	21.8	2,600	
						3,000	709.3	12.1	.....	26	3.67	sw.	21.6	.....	
						2,750	730.6	14.0	.....	25	4.00	sw.	21.3	2,000	
						2,500	752.6	15.8	.....	23	4.13	sw.	21.1	.....	
8:47	959.9	22.9	74	s.	11.2	2,385	764.7	16.8	0.66	22	4.21	sw.	21.0	1,700	
						2,250	775.2	17.6	.....	21	4.23	sw.	21.0	.....	7/10 Cl.St., w.; 2/10 St.Cu., sw.
						2,000	798.4	19.2	.....	20	4.45	sw.	21.0	.....	
						1,750	822.2	20.8	.....	19	4.67	wsw.	21.0	1,205	
						1,500	846.0	22.5	.....	18	4.91	wsw.	21.0	.....	
						1,250	870.0	24.1	.....	16	4.80	wsw.	21.0	.....	
9:29	959.8	23.9	66	s.	10.3	1,192	875.7	24.5	−1.81	16	4.92	wsw.	21.0	920	
						1,000	895.3	21.0	.....	48	11.94	ssw.	18.2	0	
9:51	959.8	24.7	63	s.	9.8	938	901.8	19.9	0.90	58	13.48	ssw.	17.3	.....	Solar halo, 22° radius, began at 10:01 a. m.
						750	921.3	21.6	.....	59	15.22	ssw.	14.2	.....	
						500	948.0	23.9	.....	61	18.09	s.	10.2	.....	
10:06	959.8	24.8	62	s.	8.5	396	959.8	24.8	.....	62	19.41	s.	8.5	.....	9/10 Cl.St., w.; 1/10 St.Cu., sw.

May 26, 1918.

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Electric potential.	Remarks.
P. M.															
1:42	966.8	14.8	90	nne.	2.2	396	966.8	14.8	.....	90	15.15	nne.	2.2	.....	10/10 St., ne.
						500	954.8	14.0	.....	93	14.86	nne.	3.9	.....	Altitude of St. base about 650 m.
1:48	966.8	15.0	88	nne.	2.2	702	932.2	12.6	0.72	98	14.30	ne.	7.1	1,000	
						750	926.8	13.9	.....	97	15.40	ne.	5.0	.....	
3:44	966.0	16.9	86	ne.	2.7	759	925.6	14.2	−1.34	97	15.70	ne.	4.6	.....	9/10 St.Cu., s.
						750	926.8	14.2	.....	97	15.70	ne.	4.6	.....	
3:52	965.9	16.9	87	ene.	2.7	593	943.8	14.4	1.32	97	15.91	ene.	5.4	.....	
						500	954.0	15.6	.....	92	16.30	ene.	4.1	.....	
3:56	965.5	17.0	87	ene.	2.7	396	965.5	17.0	.....	87	16.86	ene.	2.7	.....	10/10 St., s.

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, May, 1918*—Continued.

May 27, 1918.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	*volts.*	
12:35	967.2	16.0	86	nne.	6.7	396	967.2	16.0	.....	86	15.63	nne.	6.7	.....	10/10 St., nne.
						500	955.5	15.0	.....	89	15.17	nne.	7.3	.....	Altitude of St. base about 650 m.
12:45	967.2	15.8	88	nne.	7.6	701	933.0	13.1	0.95	94	14.18	nne.	8.4	.....	
						750	927.9	13.1	.....	94	14.18	nne.	8.1	.....	
						1,000	900.9	13.2	.....	94	14.26	ne.	6.6	.....	Altitude of St. base about 750 m.
2:31	967.2	16.7	84	nne.	5.4	1,250	874.2	13.3	.....	94	14.35	ene.	5.0	.....	
						1,329	866.1	13.3	0.08	94	14.35	ene.	4.5	0	
2:48	967.2	16.7	84	ne.	6.3	1,250	874.2	13.4	.....	94	14.35	ene.	6.3	810	
						1,158	883.9	13.6	−0.12	94	14.65	ene.	8.4	.....	
						1,000	900.9	13.4	.....	93	14.29	ene.	11.0	0	
						750	927.9	13.1	.....	91	13.72	ne.	15.2	.....	
3:02	967.2	16.7	86	ne.	5.8	731	929.7	13.1	1.10	91	13.72	ne.	15.5	.....	
						500	955.5	15.7	.....	87	15.52	ne.	8.8	.....	
3:09	967.2	16.8	85	ne.	5.8	396	967.2	16.8	.....	85	16.26	ne.	5.8	.....	10/10 St., ne.

May 29, 1918.

P. M.															
7:22	968.3	22.5	85	sse.	2.7	396	968.3	22.5	.....	85	23.17	sse.	2.7	.....	4/10 A.St., sw.; 6/10 St.Cu., sw.
						500	957.0	21.7	.....	85	22.07	sse.	5.7	.....	
7:32	968.4	22.4	86	sse.	3.1	689	936.2	20.2	0.78	85	20.13	sse.	11.2	.....	2/10 A.St., sw.; 8/10 St.Cu., sw.
						750	930.0	20.0	.....	82	19.17	sse.	10.6	.....	
						1,000	903.5	19.2	.....	67	14.91	sse.	8.3	0	Lightning to w.
8:30	968.6	21.5	88	sse.	1.8	1,109	892.0	18.8	0.14	61	13.24	sse.	7.3	330	
						1,250	877.8	18.1	.....	60	12.46	sse.	8.1	.....	
						1,500	853.0	16.8	.....	59	11.29	sse.	9.7	.....	
						1,750	828.5	15.5	.....	58	10.21	s.	11.2	.....	
						2,000	804.3	14.2	.....	56	9.07	s.	12.7	0	
8:37	968.6	21.4	88	sse.	2.2	2,238	781.2	13.0	0.53	55	8.24	s.	14.1	.....	
						2,000	804.3	14.3	.....	55	8.96	s.	12.1	.....	
						1,750	828.5	15.7	.....	55	9.81	s.	10.0	.....	
						1,500	853.0	17.0	.....	55	10.66	sse.	7.9	.....	
8:56	968.6	21.2	89	sse.	1.8	1,442	858.1	17.3	0.32	55	10.86	sse.	7.5	.....	
						1,250	877.8	18.3	.....	58	12.20	sse.	8.3	.....	
						1,000	903.5	19.6	.....	61	13.91	sse.	9.3	.....	
						750	930.0	20.9	.....	65	16.07	sse.	10.3	.....	
9:10	968.7	21.0	89	sse.	3.1	692	936.2	21.2	−0.07	66	16.62	sse.	10.5	.....	10/10 St.Cu., sw.
						500	957.0	21.1	.....	80	20.02	sse.	5.4	.....	
9:18	968.8	21.0	88	sse.	2.7	396	968.8	21.0	.....	88	21.89	sse.	2.7	.....	10/10 St.Cu., sw.; lightning to wsw.

May 30, 1918.

A. M.															
8:09	966.5	22.0	87	s.	11.6	396	966.5	22.0	.....	87	23.00	s.	11.6	.....	10/10 St.Cu., sw.
						500	954.3	21.1	.....	89	22.28	s.	15.8	.....	Sprinkling rain from 8:01 to 8:30 a. m.
8:16	966.3	21.8	88	s.	9.8	733	929.4	19.2	0.83	92	20.47	s.	25.2	1,800	
						750	927.5	19.8	.....	87	20.10	s.	24.6	.....	
8:26	965.9	21.5	88	s.	13.9	948	906.4	26.4	−2.35	29	9.98	s.	17.0	.....	
						1,000	901.5	26.0	.....	29	9.75	s.	17.8	.....	
						1,250	875.6	24.0	.....	29	8.65	ssw.	21.7	.....	
8:45	965.1	21.6	87	s.	10.7	1,473	853.0	22.2	0.80	29	7.76	ssw.	25.2	.....	9/10 St.Cu., sw.
						1,500	850.3	22.0	.....	30	7.93	ssw.	25.2	.....	
						1,750	826.0	19.8	.....	34	7.85	ssw.	25.3	.....	
						2,000	802.0	17.6	.....	39	7.85	ssw.	25.5	.....	
						2,250	778.9	15.4	.....	44	7.70	ssw.	25.6	.....	
8:59	964.5	21.9	88	s.	11.6	2,261	777.7	15.3	0.88	44	7.65	ssw.	25.6	0	
						2,500	756.0	13.1	.....	49	7.70	sw.	19.8	260	6/10 Ci.St., w.; 3/10 S .Cu., sw.
						2,750	734.0	10.8	.....	54	6.99	sw.	13.8	615	
9:52	965.1	23.4	82	ssw.	15.2	2,926	718.7	9.2	0.86	58	6.75	wsw.	9.6	.....	
						2,750	734.0	10.6	.....	57	7.28	wsw.	11.3	.....	
						2,500	756.0	12.6	.....	56	8.17	sw.	13.7	.....	
						2,250	778.9	14.6	.....	55	9.14	ssw.	16.1	0	7/10 Ci.St., w.; 2/10 St.Cu., sw.
10:30	965.2	24.3	80	ssw.	13.4	2,080	794.6	16.0	−0.81	54	9.82	ssw.	17.7	.....	
						2,000	802.0	16.6	.....	53	10.01	ssw.	18.1	.....	
						1,750	826.0	19.7	.....	50	11.48	ssw.	19.2	.....	
10:48	965.2	25.0	79	ssw.	12.1	1,536	846.6	20.4	0.27	48	11.51	ssw.	20.2	.....	
						1,500	850.3	20.5	.....	49	11.82	ssw.	20.1	.....	
						1,250	875.2	21.2	.....	57	14.35	s.	19.3	.....	7/10 Ci.St., w.; 2/10 Cu., ssw.
11:05	965.2	25.2	78	ssw.	15.6	1,085	891.8	21.6	−0.53	62	16.00	s.	18.8	.....	
						1,000	900.8	21.1	.....	70	17.52	s.	18.3	.....	
11:08	965.2	25.1	77	ssw.	13.4	804	921.2	20.1	1.37	90	21.18	s.	17.1	.....	
						750	927.5	20.8	.....	89	21.87	s.	16.3	.....	
						500	954.0	24.3	.....	82	24.92	ssw.	12.7	.....	
11:22	965.2	25.7	79	ssw.	11.2	396	965.2	25.7	.....	79	26.09	ssw.	11.2	.....	6/10 Ci.St., w.; 3/10 Cu., ssw.

May 31, 1918.

P. M.															
12:12	954.9	19.8	86	s.	8.9	396	954.9	19.8	.....	86	19.87	s.	8.9	.....	8/10 St.Cu., sw.; 2/10 St., ssw.
						500	943.3	19.4	.....	85	19.15	s.	12.0	.....	Sprinkling rain from 11:56 a. m. to 12:16 p. m.
						750	916.2	18.5	.....	83	17.68	s.	19.3	.....	
12:16	954.8	20.0	81	s.	7.2	757	915.5	18.5	0.36	83	17.68	s.	19.5	.....	Altitude of St. base about 1,100 m.
						1,000	889.6	17.1	.....	76	14.82	s.	22.7	.....	
						1,250	863.8	15.7	.....	69	12.31	ssw.	25.9	.....	
						1,500	838.8	14.2	.....	62	10.04	ssw.	29.2	.....	
12:42	954.5	20.6	80	s.	10.7	1,578	831.1	13.8	0.53	60	9.47	ssw.	30.2	0	
						1,500	838.8	14.2	.....	60	9.71	ssw.	29.3	.....	Rain from 12:53 p. m. to 1:20 p. m
						1,250	863.8	15.4	.....	64	11.20	ssw.	26.3	.....	
						1,000	889.4	16.6	.....	66	12.47	s.	23.4	2,500	
						750	915.8	17.8	.....	69	14.06	s.	20.4	.....	
1:17	954.1	20.2	73	ssw.	13.0	674	923.8	18.2	0.94	70	14.63	s.	19.5	0	
						500	942.5	19.8	.....	71	16.40	ssw.	14.0	.....	
1:23	954.1	20.8	72	ssw.	10.7	396	954.1	20.8	.....	72	17.69	ssw.	10.7	.....	9/10 St.Cu., sw.

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, June, 1918.*

June 1, 1918.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
5:22	962.7	14.6	76	w.	5.8	396	962.7	14.6	.....	76	12.63	w.	5.8	.....	Cloudless.
						500	951.0	15.6	.....	66	11.70	w.	11.3	.....	
5:28	962.9	14.7	76	w.	5.8	614	938.5	16.7	−0.96	56	10.65	wnw.	17.4	0	
						750	923.6	16.6	.....	52	9.82	wnw.	16.9	.....	
						1,000	897.1	16.3	.....	45	8.34	nw.	16.1	.....	
						1,250	871.7	16.0	.....	38	6.91	nw.	15.2	0	
6:02	963.8	15.3	76	w.	5.4	1,285	868.1	16.0	0.10	37	6.73	nw.	15.1	.....	
						1,500	846.5	14.0	.....	40	6.39	nw.	15.3	.....	
						1,750	821.7	11.6	.....	43	5.87	wnw.	15.5	.....	
6:17	964.0	15.6	76	w.	5.8	1,816	815.4	11.0	0.94	44	5.78	wnw.	15.5	840	
						2,000	797.4	10.0	.....	42	5.16	wnw.	15.2	.....	
						2,250	773.8	8.6	.....	40	4.47	wnw.	17.2	.....	
						2,500	750.8	7.2	.....	38	3.86	wnw.	18.1	1,600	
						2,750	728.5	5.8	.....	36	3.32	wnw.	19.1	.....	
						3,000	706.7	4.4	.....	33	2.76	wnw.	20.0	.....	
7:02	964.5	16.5	75	w.	4.9	3,045	702.6	4.1	0.56	33	2.70	wnw.	20.2	2,100	
						3,250	685.6	2.5	.....	37	2.70	wnw.	20.1	.....	
						3,500	664.8	0.5	.....	41	2.60	wnw.	20.0	2,700	
						3,750	644.9	−1.6	.....	46	2.46	wnw.	19.9	.....	
						4,000	625.3	−3.6	.....	50	2.26	wnw.	19.8	.....	
7:40	965.2	17.9	68	w.	5.4	4,030	622.3	−3.8	0.77	51	2.26	wnw.	19.8	3,400	
						4,000	625.3	−3.6	.....	51	2.31	wnw.	19.8	.....	
						3,750	644.9	−1.7	.....	51	2.70	wnw.	19.6	.....	
						3,500	664.8	0.1	.....	51	3.14	wnw.	19.4	.....	
						3,250	685.6	1.9	.....	51	3.58	wnw.	19.3	2,000	
						3,000	707.1	3.8	.....	50	4.01	wnw.	19.1	.....	
						2,750	729.5	5.6	.....	50	4.55	wnw.	18.9	.....	
						2,500	752.2	7.4	.....	50	5.15	wnw.	18.7	.....	
8:28	965.7	19.0	61	w.	5.4	2,465	755.2	7.7	0.54	50	5.26	wnw.	18.7	1,390	
						2,250	775.3	8.9	.....	49	5.59	wnw.	17.7	.....	
						2,000	799.1	10.2	.....	47	5.85	wnw.	16.6	.....	
8:45	965.8	19.2	63	w.	4.5	1,765	821.7	11.5	0.52	46	6.24	wnw.	15.5	730	
						1,750	823.5	11.6	.....	46	6.28	wnw.	15.4	.....	
						1,500	848.0	12.9	.....	49	7.29	wnw.	13.5	.....	
						1,250	873.4	14.2	.....	51	8.26	wnw.	11.7	0	
						1,000	899.5	15.5	.....	54	9.51	wnw.	9.9	.....	
						750	926.8	16.8	.....	56	10.71	wnw.	8.0	.....	
9:06	965.9	19.5	65	wnw.	4.0	583	945.1	17.7	1.07	58	11.74	wnw.	6.8	0	
						500	954.5	18.6	.....	61	13.07	wnw.	5.6	.....	
9:12	966.0	19.7	65	wnw.	4.0	396	966.0	19.7	.....	65	14.92	wnw.	4.0	.....	Cloudless.

June 2, 1918.

A. M.															
7:03	974.0	15.6	74	ne.	3.1	396	974.0	15.6	.....	74	13.11	ne.	3.1	.....	Cloudless.
						500	962.0	16.0	.....	57	10.36	nne.	6.8	.....	
7:07	974.0	15.6	74	ne.	3.6	597	951.3	16.3	− 0.35	38	7.04	nne.	10.2	0	
						750	934.2	16.0	.....	28	5.09	nne.	10.4	.....	
7:13	974.0	15.6	74	ne.	3.6	836	924.8	15.9	0.17	23	4.16	nne.	10.5	0	
						1,000	907.0	15.7	.....	33	5.89	nne.	6.2	.....	
8:58	973.6	18.5	58	ne.	3.6	1,171	888.9	15.4	0.21	44	7.70	nne.	1.8	0	
						1,000	907.0	15.9	.....	47	8.49	ne.	2.6	.....	
						750	934.2	16.6	.....	50	9.44	ne.	3.7	.....	
9:33	973.8	19.5	56	ene.	2.7	565	954.7	17.1	1.42	53	10.34	ene.	4.6	0	
						500	962.0	18.0	.....	53	10.94	ene.	3.9	.....	
9:35	973.8	19.5	52	ene.	2.7	396	973.8	19.5	.....	52	11.79	ene.	2.7	.....	Cloudless.

June 3, 1918.

A. M.															
6:46	969.5	21.0	81	s.	7.6	396	969.5	21.0	.....	81	20.14	s.	7.6	.....	2/10 St.Cu., sw.
						500	958.0	20.7	.....	78	19.05	ssw.	13.0	.....	
6:53	969.3	21.4	79	s.	8.0	733	932.3	20.1	0.27	70	16.47	sw.	25.0	0	
7:01	969.2	21.5	79	s.	8.9	748	930.7	22.0	−12.67	65	17.19	sw.	23.2	0	
						1,000	903.6	20.6	.....	65	15.78	sw.	22.6	.....	
						1,250	877.4	19.2	.....	65	14.46	sw.	22.1	460	
						1,500	852.2	17.9	.....	66	13.54	sw.	21.5	.....	
						1,750	828.3	16.5	.....	66	12.39	sw.	21.0	.....	
						2,000	805.0	15.1	.....	66	11.33	sw.	20.4	.....	
7:24	969.2	21.9	80	s.	8.9	2,061	798.9	14.8	0.55	66	11.11	sw.	20.3	810	
						2,250	781.8	13.4	.....	68	10.45	sw.	20.9	.....	2/10 Ci.St., near horizon
						2,500	758.9	11.6	.....	70	9.56	sw.	21.6	.....	
						2,750	736.8	9.8	.....	72	8.73	wsw.	22.3	1,400	
						3,000	714.8	8.1	.....	75	8.10	wsw.	23.1	1,700	
8:04	969.2	23.0	78	ssw.	9.8	3,146	702.0	7.0	0.72	76	7.62	wsw.	23.5	.....	
						3,250	693.5	6.3	.....	59	5.63	wsw.	21.8	*2,000	
8:40	968.8	24.3	76	ssw.	15.6	3,461	675 1	4.8	0.67	26	2.24	wsw.	18.5	2,000	
						3,250	693.0	6.2	.....	37	3.51	wsw.	18 4	1,400	
						3,000	714.0	7.8	.....	50	5.29	wsw.	18.3	.....	
9:07	968.6	24.9	74	ssw.	11.6	2,933	718.3	8.1	0.82	53	5.72	wsw.	18.3	.....	1/10 Ci.St., w.; 1/10 Cu., sw.
						2,750	736.0	9.8	.....	52	6.30	wsw.	19.1	.....	
						2,500	758.8	11.8	.....	50	6.92	wsw.	20.0	1,200	
						2,250	781 8	13 9	.....	48	7.62	wsw.	20.9	.....	
						2,000	805 0	16.0	.....	47	8.54	sw.	21.9	.....	
						1,750	828.9	18.0	.....	45	9.29	sw.	22.8	.....	
						1,500	853.1	20.1	.....	43	10.12	sw.	23.8	0	
9:56	968.6	26.3	66	ssw.	11.6	1,327	870 3	21 5	− 1.74	42	10.77	sw.	24.4	.....	
						1,250	878 2	20 2	.....	56	13.26	sw.	23.2	.....	
10:10	968.5	26.5	68	ssw.	11.2	1,183	884.9	19 0	0.80	68	14 94	sw.	22 1	0	1/10 Ci.St., w.; 3/10 Cu., sw.
						1,000	903.8	20.5	.....	69	16.64	sw.	18 8	.....	
10:23	968.4	26.7	66	ssw.	12.5	806	924.1	22.0	1.22	70	18.51	sw.	15.4	0	
						750	930.5	22.7	.....	69	19.04	sw.	15.1	.....	
						500	957.6	25 7	.....	66	21 80	ssw.	13.9	.....	
10:30	968.4	27.0	65	ssw.	13.4	396	968.4	27.0	.....	65	23.18	ssw.	13.4	.....	3/10 St.Cu., sw.; 4/10 Cu., sw.

*Voltage varying suddenly between 2,000 and 1,000 volts.

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, June, 1918*—Continued.

June 4, 1918.

Time.	Surface					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts*	
7:12	971.7	19.0	83	se.	2.2	396	971.7	19.0	.....	83	18.24	se.	2.2	.....	7/10 St.Cu., wsw.
						500	960.0	19.4	.....	74	16.67	ese.	3.7	.....	
7:38	971.9	19.8	76	se.	2.2	726	935.4	20.1	−0.33	55	12.94	ene.	7.1	.....	
						750	932.3	20.0	.....	55	12.86	ene.	7.0	.....	Light sprinkle of rain at 8:06 a. m.
						1,000	906.1	19.0	.....	55	12.08	ese.	6.1	.....	7/10 A.Cu., wsw.
						1,250	880.8	17.9	.....	55	11.28	se.	5.2	.....	
						1,500	855.8	16.9	.....	55	10.59	sse.	4.3	0	
						1,750	830.4	15.8	.....	55	9.87	ssw.	3.4	1,010	4/10 A.Cu., wsw.
9:54	972.0	23.2	64	e.	6.7	1,784	827.2	15.7	0.44	55	9.81	ssw.	3.3	810	
						1,750	830.4	15.9	.....	55	9.94	ssw.	3.6	.....	
						1,500	855.2	16.7	.....	56	10.65	s.	5.6	520	Few Ci.St., wsw.; 4/10 A.Cu., wsw.
						1,250	880.0	17.5	.....	56	11.20	sse.	7.6	1,170	Few Ci.St., wsw.; 5/10 A.Cu., wsw.
P. M.															
12:43	971.0	24.2	69	ese.	5.4	1,059	899.4	19.0	0.47	57	12.52	se.	9.0	1,010	Light rain from 12:25 to 12:41 p. m.
						1,000	905.5	19.3	.....	59	13.21	se.	8.8	.....	
						750	931.8	20.4	.....	69	16.54	se.	8.1	.....	Few Ci.St., wsw.; 6/10 St.Cu., wsw.
12:52	971.0	24.6	70	ese.	5.4	629	945.4	21.0	1.59	74	18.40	se.	7.8	.....	
						500	959.5	23.0	.....	72	20.23	ese.	6.5	.....	
12:57	970.9	24.7	70	ese.	5.4	396	970.9	24.7	.....	70	21.78	ese.	5.4	.....	3/10 Ci.St., wsw.; 4/10 St.Cu., wsw.

June 6, 1918.

A. M.															
10:38	970.3	22.6	65	n.	5.4	396	970.3	22.6	.....	65	17.83	n.	5.4	.....	7/10 Ci.St., w.; 1/10 Cu., nnw.
						500	958.7	20.6	.....	67	16.53	n.	11.7	.....	Partial so'ar halo, 22° radius, from
10:41	970.4	22.8	65	n.	5.4	539	954.5	19.9	1.89	68	15.80	n.	14.0	.....	10:20 to 10:52 a. m.
10:45	970.4	22.6	62	n.	5.4	705	936.2	18.0	1.14	74	15.27	n.	12.9	0	
						750	931.0	17.6	.....	75	15.10	n.	12.9	.....	Altitude of Cu. base about 1,400 m.
						1,000	904.2	15.3	.....	83	14.43	n.	13.1	.....	
						1,250	878.3	13.1	.....	91	13.72	n.	13.3	260	
11:03	970.6	23.0	67	n.	4.5	1,368	866.1	12.0	0.90	95	13.33	n.	13.4	.....	
						1,500	852.7	13.7	.....	55	8.62	n.	13.9	880	2/10 Ci.St., w.; 8/10 Cu., n.
11:13	970.8	22.6	67	n.	6.3	1,620	840.4	15.3	−1.31	19	3.30	n.	14.3	.....	
						1,750	827.6	14.3	.....	17	2.77	n.	15.1	.....	
						2,000	803.3	12.3	.....	14	2.00	n.	16.8	.....	
						2,250	780.0	10.4	.....	11	1.39	n.	18.4	1,100	
11:31	971.0	22.6	70	n.	5.8	2,453	761.1	8.8	0.78	9	1.02	n.	19.7	.....	
						2,500	757.0	8.4	.....	11	1.21	n.	19.7	.....	
						2,750	734.4	6.3	.....	23	2.20	n.	19.7	1,400	
11:44	971.1	22.1	68	n.	6.3	2,886	721.8	5.2	0.83	30	2.66	n.	19.7	.....	
						3,000	712.3	4.8	.....	20	1.72	n.	17.9	.....	10/10 St.Cu., n.
P. M.															
12:04	971.3	22.0	69	n.	5.4	3,180	696.6	4.1	0.58	3	0.25	n.	15.1	2,000	Weather threatening.
						3,000	712.3	5.5	.....	11	0.99	n.	16.7	1,500	
						2,750	734.4	7.6	.....	21	2.19	n.	18.8	.....	
12:30	971.7	21.9	71	n.	7.2	2,658	742.8	8.3	0.49	25	2.74	n.	19.6	.....	
						2,500	757.0	9.1	.....	18	2.08	nnw.	19.5	.....	
12:42	971.8	21.4	72	n.	5.8	2,373	768.7	9.7	0.59	12	1.44	nnw.	19.5	920	
						2,250	780.0	10.4	.....	16	2.02	nnw.	18.4	.....	
						2,000	804.4	11.9	.....	25	3.48	nnw.	16.3	.....	
						1,750	829.0	13.4	.....	33	5.07	n.	14.1	.....	
1:02	972.0	21.5	70	n.	6.3	1,581	845.2	14.4	−1.24	39	6.40	n.	12.7	0	
						1,500	854.0	13.4	.....	55	8.45	n.	13.2	.....	
1:06	972.0	21.3	70	n.	4.5	1,330	870.9	11.3	0.78	90	12.05	n.	14.3	.....	
1:13	972.1	21.2	72	n.	4.5	1,250	879.6	11.9	.....	90	12.54	n.	14.4	.....	Altitude of St.Cu. base about
						1,176	887.1	12.5	0.89	89	12.90	n.	14.5	.....	1,200 m.
						1,000	905.8	14.1	.....	82	13.19	n.	14.5	.....	
						750	933.0	16.3	1.46	72	13.34	n.	14.6	.....	
1:26	972.1	21.5	72	nne.	5.4	705	937.9	16.7	.....	70	13.31	n.	14.6	.....	
						500	960.8	19.7	.....	72	16.52	nne.	8.5	.....	
1:34	972.2	21.2	73	nne.	5.4	396	972.2	21.2	.....	73	18.38	nne.	5.4	.....	10/10 St.Cu., n.

June 7, 1918.

A. M.															
6:51	978.0	11.8	72	ne.	3.1	396	978.0	11.8	.....	72	9.96	ne.	3.1	.....	4/10 Ci.St., wsw.
						500	966.0	11.4	.....	66	8.90	ene.	6.8	.....	
6:56	978.0	12.0	70	ene.	3.1	745	938.0	10.6	0.34	50	6.39	ene.	15.5	.....	
7:03	978.0	12.1	69	ene.	4.9	894	921.4	9.8	0.53	44	5.33	ene.	11.9	.....	
						1,000	909.8	10.3	.....	31	3.88	ne.	9.9	.....	
7:40	978.3	12.8	59	ene.	4.5	1,195	888.8	11.3	−0.50	7	0.94	ne.	6.3	380	
						1,250	883.0	11.2	.....	5	0.66	ene.	5.2	0	
9:08	978.0	15.0	53	ese.	5.8	1,380	869.3	11.1	−0.10	1	0.13	ene.	2.6	.....	
						1,250	883.0	10.7	.....	1	0.13	ene.	4.5	.....	
						1,000	909.8	9.9	.....	2	0.24	e.	8.3	.....	
9:36	978.0	15.3	50	e.	4.5	970	913.2	9.8	0.71	2	0.24	e.	8.7	.....	
						750	937.5	11.4	.....	35	4.72	ese.	8.8	.....	
9:46	978.0	15.6	52	ese.	4.5	674	946.3	11.9	1.40	47	6.55	ese.	8.9	.....	
						500	966.0	14.3	.....	50	8.15	ese.	5.6	.....	
9:50	978.0	15.8	52	ese.	3.6	396	978.0	15.8	.....	52	9.33	ese.	3.6	.....	5/10 Ci.St., w.

June 8, 1918 (No. 1).

A. M.															
6:29	973.3	15.3	80	ssw.	6.7	396	973.3	15.3	.....	80	13.90	ssw.	6.7	.....	3/10 Ci.St., wnw.
						500	961.5	16.1	.....	74	13.54	ssw.	13.3	.....	
6:31	973.3	15.4	80	ssw.	6.7	561	954.4	16.6	−0.79	71	13.41	ssw.	17.1	.....	
						750	933.5	15.7	.....	75	13.38	ssw.	14.5	0	
						1,000	906.8	14.4	.....	81	13.28	ssw.	11.1	.....	
6:47	973.3	15.9	81	ssw.	5.8	1,047	901.6	14.2	0.49	82	13.28	ssw.	10.5	705	
						1,250	880.1	14.2	.....	54	8.74	ssw.	9.0	890	
						1,500	854.2	14.1	.....	20	3.22	sw.	7.2	.....	
7:30	973.3	16.9	81	sw.	6.3	1,515	853.0	14.1	0.02	18	2.90	sw.	7.1	810	7/10 Ci., wnw.

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, June, 1918*—Continued.

June 8, 1918 (No. 1)—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
						1,750	829.4	13.1	.....	27	4.07	sw.	8.3	1,170	
8:17	973.2	18.2	78	sw.	8.0	1,869	818.0	12.6	0.42	31	4.52	sw.	8.9	1,170	
						2,000	805.5	11.7	.....	32	4.40	sw.	8.8	.....	
						2,250	782.4	10.0	.....	33	4.05	sw.	8.7	.....	
						2,500	759.0	8.4	.....	35	3.86	sw.	8.6	1,430	
						2,750	736.5	6.7	.....	36	3.53	ssw.	8.5	.....	
						3,000	714.0	5.0	.....	37	3.23	ssw.	8.3	.....	
						3,250	691.9	3.3	.....	39	3.02	ssw.	8.2	.....	
9:22	972.9	20.1	69	ssw.	5.8	3,266	690.3	3.2	0.64	39	3.00	ssw.	8.2	.....	
						3,250	691.9	3.3	.....	39	3.02	ssw.	8.2	.....	4/10 Cl.St., w.
						3,000	714.0	4.8	.....	39	3.35	ssw.	8.2	.....	
						2,750	736.5	6.3	.....	39	3.72	ssw.	8.3	.....	
						2,500	759.0	7.9	.....	39	4.15	ssw.	8.3	1,200	
						2,250	782.4	9.4	.....	38	4.48	sw.	8.3	.....	
						2,000	805.5	10.9	.....	38	4.96	sw.	8.4	755	
						1,750	829.4	12.4	.....	38	5.47	sw.	8.4	.....	
10:07	972.6	21.0	66	sw.	7.2	1,719	832.2	12.6	0.00	38	5.54	sw.	8.4	.....	
						1,500	854.2	12.6	.....	76	11.09	sw.	9.8	.....	
10:13	972.5	21.0	66	sw.	6.7	1,480	856.2	12.6	0.68	79	11.53	sw.	9.9	590	
						1,250	880.1	14.2	.....	70	11.33	sw.	11.8	.....	
10:25	972.5	21.2	64	sw.	7.6	1,199	885.3	14.5	0.47	68	11.23	sw.	12.2	380	
						1,000	906.8	15.4	.....	72	12.60	sw.	10.6	.....	
						750	933.5	16.6	.....	76	14.36	ssw.	8.7	.....	
10:38	972.4	21.7	64	ssw.	6.3	663	942.8	17.0	1.87	78	15.12	ssw.	8.0	0	
						500	960.6	20.1	.....	70	16.47	ssw.	7.0	.....	
10:44	972.4	22.0	65	ssw.	6.3	396	972.4	22.0	.....	65	17.19	ssw.	6.3	.....	4/10 Cl.St., w.; Few Cu., sw.

June 8, 1918 (No. 2).

A. M.															
11:25	972.0	22.7	60	sw.	6.3	396	972.0	22.7	.....	60	16.55	sw.	6.3	.....	2/10 Cl.St., w.
						500	960.6	21.4	.....	64	16.31	sw.	7.2	.....	Few Cu., sw.
						750	933.0	18.2	.....	73	15.26	sw.	9.4	0	
11:34	971.9	23.0	62	sw.	8.0	787	928.9	17.7	1.28	74	14.98	sw.	9.7	.....	
						1,000	905.8	15.9	.....	79	14.28	sw.	9.5	.....	
11:53	971.7	23.3	61	wsw.	7.2	1,014	904.3	15.8	0.84	79	14.18	sw.	9.5	540	
						1,150	878.8	14.8	.....	73	12.29	sw.	9.8	.....	
						1,500	852.8	13.8	.....	67	10.57	ssw.	10.0	680	
						1,750	828.0	12.8	.....	61	9.02	ssw.	10.3	.....	
						2,000	804.1	11.7	.....	55	7.56	ssw.	10.6	.....	
						2,250	780.9	10.7	.....	49	6.31	s.	10.9	.....	
P. M.															
12:40	971.4	24.0	60	sw.	6.3	2,373	769.6	10.2	0.41	46	5.73	s.	11.0	1,500	
						2,500	757.7	9.3	.....	45	5.27	s.	10.7	.....	
						2,750	735.0	7.5	.....	43	4.46	ssw.	10.0	2,000	1/10 Cl.St., w.; few Cu., sw.
						3,000	713.2	5.8	.....	41	3.78	sw.	9.4	.....	
1:26	971.0	25.0	57	sw.	6.3	3,148	700.5	4.7	0.71	40	3.42	sw.	9.0	2,200	
						3,250	692.0	4.2	.....	37	3.05	sw.	9.3	2,300	
						3,500	670.8	2.8	.....	29	2.17	sw.	10.0	.....	
2:07	970.5	25.0	51	sw.	6.3	3,697	654.3	1.8	0.58	23	1.60	sw.	10.5	.....	
						3,500	670.8	3.0	.....	24	1.82	sw.	10.9	.....	
						3,250	692.0	4.6	.....	26	2.20	sw.	11.3	.....	
						3,000	713.2	6.2	.....	28	2.65	sw.	11.8	1,700	
						2,750	735.0	7.8	.....	30	3.17	ssw.	12.3	1,700	
						2,500	757.7	9.4	.....	32	3.77	ssw.	12.7	.....	4/10 Cl., wnw.; few Cu., ssw.
						2,250	780.9	11.0	.....	34	4.46	ssw.	13.2	.....	
2:47	970.1	25.8	50	sw.	7.2	2,087	795.7	12.0	0.39	35	4.91	ssw.	13.5	1,010	
						2,000	804.1	12.3	.....	40	5.72	ssw.	12.8	.....	
						1,750	828.0	13.3	.....	54	8.25	ssw.	10.6	.....	
						1,500	852.8	14.3	.....	68	11.08	ssw.	8.5	.....	
3:03	969.9	26.0	47	sw.	7.6	1,445	858.9	14.5	0.92	71	11.72	ssw.	8.0	0	
						1,250	878.8	16.3	.....	67	12.42	ssw.	10.9	.....	
3:10	969.9	26.1	47	sw.	8.0	1,099	894.5	17.7	1.03	64	12.96	ssw.	13.1	.....	
						1,000	904.9	18.3	.....	60	12.62	ssw.	12.3	.....	
3:20	969.8	26.1	46	sw.	5.8	787	927.2	20.9	1.30	51	12.61	ssw.	10.7	.....	
						750	931.4	21.4	.....	51	13.00	ssw.	10.5	.....	
						500	958.5	24.6	.....	47	14.54	ssw.	9.1	.....	
3:27	969.8	26.0	46	sw.	8.5	396	969.8	26.0	.....	46	15.47	sw.	8.5	.....	Few Cl., wnw.; few Cu., ssw.

June 8, 1918 (No. 3).

P. M.															
4:10	969.5	26.4	47	sw.	7.2	396	969.5	26.4	.....	47	16.18	sw.	7.2	.....	Few Cl., wnw.; few Cu., ssw.
						500	958.3	25.2	.....	46	14.75	sw.	7.5	.....	
4:19	969.4	26.4	42	sw.	5.4	718	934.4	22.6	1.18	43	11.79	ssw.	8.0	.....	
						750	931.0	22.3	.....	44	11.85	ssw.	8.1	.....	
						1,000	904.2	19.8	.....	52	12.01	ssw.	9.0	0	
						1,250	878.3	17.3	.....	60	11.85	sw.	9.8	.....	
4:46	969.1	26.0	45	ssw.	6.3	1,340	869.1	16.4	1.00	63	11.75	sw.	10.1	.....	
						1,500	852.8	15.0	.....	69	11.76	sw.	10.2	330	Maximum phase of eclipse, 5:25 p.m.
						1,750	827.0	12.7	.....	78	11.46	sw.	10.4	.....	
5:35	968.3	24.0	52	ssw.	4.9	1,809	821.1	12.2	0.90	80	11.37	sw.	10.5	.....	
						2,000	802.1	12.8	.....	33	4.88	wsw.	8.6	1,205	Few Cl., wnw.; few Cl.St., wnw.
6:06	967.9	24.6	55	ssw.	4.9	2,128	789.9	13.2	−0.32	*1	0.15	wsw.	7.3	.....	
						2,250	778.0	12.6	.....	*1	0.15	wsw.	7.3	1,300	
						2,500	754.8	11.4	.....	*1	0.13	wsw.	7.4	.....	
						2,750	732.8	10.2	.....	*1	0.12	sw.	7.5	.....	
6:27	967.8	25.0	54	ssw.	4.9	2,955	715.6	9.2	0.48	*1	0.12	sw.	7.6	1,205	
						2,750	732.8	10.2	.....	*1	0.12	sw.	7.7	.....	
						2,500	754.8	11.4	.....	*1	0.13	sw.	7.8	.....	
						2,250	778.0	12.6	.....	*1	0.15	sw.	7.9	.....	

* Estimated.

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, June, 1918*—Continued.

June 8, 1918 (No. 3)—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
6:42	967.7	24.5	53	SSW.	4.5	2,063	796.1	13.5	−1.86	*1	0.15	SW.	8.0	.....	
						2,000	802.1	12.3	.....	24	3.43	SW.	8.8	1,010	
6:54	967.6	24.1	57	SSW.	3.6	1,950	807.0	11.4	0.51	43	5.80	SW.	9.5	.....	
						1,750	827.0	12.4	.....	61	8.78	SW.	9.4	.....	
6:58	967.6	24.0	59	SSW.	3.6	1,578	843.4	13.3	1.02	76	11.61	SW.	9.4	.....	
						1,500	851.8	14.1	.....	74	11.91	SW.	9.4	0	Few Cl.St., wnw.
						1,250	877.1	16.6	.....	66	12.47	SW.	9.6	.....	
						1,000	902.9	19.2	.....	59	13.13	SSW.	9.7	.....	
						750	929.2	21.7	.....	51	13.24	SSW.	9.8	.....	
7:27	967.6	22.9	60	SSW.	3.6	715	932.8	22.1	0.13	50	13.30	SSW.	9.8	.....	
						500	956.4	22.4	.....	59	15.98	SSW.	5.9	.....	
7:42	967.6	22.5	63	SSW.	4.0	396	967.6	22.5	.....	63	17.17	SSW.	4.0	.....	Few Cl.St., wnw.

June 9, 1918.

A. M.															
6:09	968.6	18.2	90	SW.	5.8	396	968.6	18.2	.....	90	18.81	SW.	5.8	.....	Cloudless.
						500	957.0	19.6	.....	80	18.25	SW.	10.5	.....	
6:11	968.6	18.3	89	SW.	5.8	624	943.4	21.3	−1.36	70	17.73	WSW.	16.2	0	
						750	929.6	21.2	.....	68	17.12	WSW.	14.0	.....	
						1,000	903.0	20.9	.....	65	16.07	WSW.	9.5	.....	
6:50	968.6	19.2	88	SW.	6.3	1,186	884.2	20.7	0.11	62	15.14	WSW.	6.2	0	Few Ci., nw.
						1,250	877.7	20.3	.....	63	15.01	WSW.	6.1	.....	
						1,500	852.4	18.7	.....	64	13.80	W.	6.0	.....	
						1,750	827.6	17.0	.....	67	12.98	W.	5.7	.....	
						2,000	803.8	15.4	.....	69	12.08	WNW.	5.5	.....	
8:15	968.5	22.2	79	WSW.	7.6	2,167	788.5	14.3	0.66	70	11.41	WNW.	5.4	0	
						2,000	803.8	15.4	.....	68	11.90	WNW.	5.3	.....	
						1,750	827.6	17.1	.....	65	12.68	WNW.	5.2	.....	
						1,500	852.4	18.7	.....	62	13.37	W.	5.0	.....	
						1,250	877.7	20.4	.....	58	13.90	W.	4.9	.....	
8:22	968.5	22.7	78	WSW.	7.2	1,219	880.9	20.6	0.44	58	14.08	W.	4.9	0	
						1,000	903.0	20.7	.....	59	14.41	W.	6.9	.....	
8:56	968.2	23.4	73	WSW.	7.2	761	928.4	20.8	0.19	60	14.74	WSW.	9.0	0	
						750	929.6	20.8	.....	62	15.23	WSW.	8.9	.....	
8:58	968.2	23.5	73	WSW.	6.3	653	940.1	21.0	1.01	79	19.65	WSW.	8.3	0	
						500	957.0	22.5	.....	75	20.44	WSW.	7.1	.....	
9:02	968.2	23.6	72	WSW.	6.3	396	968.2	23.6	.....	72	20.97	WSW.	6.3	.....	Few Cl.St., nw.

June 11, 1918 (No. 1).

A. M.															
6:21	965.2	23.0	62	SW.	5.4	396	965.2	23.0	.....	62	17.42	SW.	5.4	.....	Few Cl.St., near horizon.
						500	954.4	27.8	.....	43	16.07	WSW.	11.1	.....	
6:24	965.2	23.0	63	SW.	5.8	574	946.0	31.2	−4.61	29	13.18	WSW.	15.1	.....	
						750	928.0	31.1	.....	19	8.59	WSW.	15.8	.....	
6:30	965.2	23.0	64	SW.	5.4	812	921.1	31.0	0.08	16	7.19	WSW.	16.0	.....	
						1,000	902.0	29.8	.....	17	7.13	WSW.	15.5	.....	
						1,250	876.8	28.2	.....	17	6.50	W.	14.7	.....	Cloudless.
						1,500	852.8	26.7	.....	18	5.96	W.	14.0	0	
						1,750	828.6	25.1	.....	19	6.06	W.	13.3	.....	
						2,000	805.6	23.5	.....	20	5.79	WNW.	12.5	.....	
7:06	965.3	24.9	58	WSW.	5.8	2,052	800.5	23.2	0.63	20	5.69	WNW.	12.4	590	
						2,250	782.6	21.5	.....	22	5.64	WNW.	13.8	.....	
						2,500	760.5	19.4	.....	25	5.63	WNW.	15.6	835	
7:33	965.6	25.1	63	WSW.	5.4	2,553	755.9	18.8	0.88	26	5.64	WNW.	16.0	.....	
						2,750	739.5	17.0	.....	30	5.81	WNW.	16.1	.....	
						3,000	718.8	14.6	.....	35	5.82	WNW.	16.2	.....	
						3,250	698.2	12.3	.....	40	5.72	WNW.	16.3	1,400	
						3,500	677.4	9.9	.....	45	5.49	NW.	16.5	1,600	
						3,750	657.1	7.6	.....	50	5.22	NW.	16.6	.....	
						4,000	637.0	5.2	.....	55	4.87	NW.	16.7	.....	
8:16	965.7	27.6	52	WSW.	4.5	4,176	623.0	3.6	0.94	58	4.59	NW.	16.8	.....	
						4,250	617.3	3.0	.....	58	4.40	NW.	17.1	2,400	
						4,500	598.0	1.0	.....	60	3.94	NW.	18.2	.....	
						4,750	580.0	−1.0	.....	62	3.48	NW.	19.3	.....	
						5,000	562.5	−3.0	.....	63	2.99	NW.	20.4	3,100	
						5,250	545.0	−5.0	.....	65	2.61	NW.	21.5	.....	
9:07	965.2	31.2	44	WSW.	7.2	5,280	542.9	−5.2	0.84	65	2.56	NW.	21.6	.....	
						5,250	545.0	−4.9	.....	65	2.63	NW.	21.5	.....	
						5,000	562.5	−2.7	.....	65	3.17	NW.	20.7	.....	
						4,750	580.0	−0.5	.....	65	3.81	NW.	19.9	.....	
						4,500	598.0	1.7	.....	65	4.49	NW.	19.1	.....	Few Cl.St., nw.
						4,250	616.5	3.9	.....	65	5.25	NW.	18.4	.....	
						4,000	636.1	6.1	.....	65	6.12	NW.	17.6	.....	
9:53	965.2	31.8	48	WSW.	5.4	3,754	655.6	8.3	0.89	65	7.12	NW.	16.8	1,200	
						3,500	676.4	10.6	.....	56	7.16	NW.	16.3	.....	
						3,250	697.0	12.8	.....	47	6.95	NW.	15.8	.....	
10:09	965.2	32.6	44	WSW.	7.6	3,045	713.7	14.6	0.88	40	6.65	NW.	15.4	835	
						3,000	717.8	15.0	.....	39	6.65	NW.	15.3	.....	Cloudless.
						2,750	739.0	17.2	.....	34	6.67	NW.	14.7	.....	
						2,500	760.5	19.4	.....	28	6.31	NW.	14.1	460	
						2,250	782.5	21.6	.....	23	5.93	NW.	13.5	380	
10:40	965.2	33.3	35	WNW.	4.5	2,022	803.6	23.6	0.85	18	5.24	NW.	13.0	.....	
						2,000	805.4	23.8	.....	18	5.31	NW.	13.1	.....	
						1,750	828.3	25.9	.....	16	5.35	NW.	13.8	0	
						1,500	852.5	28.1	.....	13	4.94	NW.	14.6	.....	
10:56	965.2	33.0	36	WNW.	4.0	1,250	877.0	30.2	−0.84	11	4.72	NW.	15.3	.....	
11:05	965.2	33.0	39	WNW.	4.0	1,023	899.8	28.3	0.38	19	7.31	WNW.	7.5	.....	
						1,000	902.0	28.4	.....	20	7.74	WNW.	7.8	.....	
						750	928.0	29.3	.....	30	12.23	WNW.	9.0	.....	
11:10	965.2	32.9	41	WNW.	4.9	703	952.7	29.5	1.07	32	13.20	WNW.	9.2	.....	
						500	954.4	31.7	.....	39	18.24	WNW.	6.4	.....	
11:16	965.2	32.8	42	WNW.	4.9	396	965.2	32.8	.....	42	20.90	WNW.	4.9	.....	Few A.Cu., nw.

*Estimated.

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, June, 1918*—Continued.

June 11, 1918 (No. 2).

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
11:59	965.2	32.6	42	nnw.	4.5	395	965.2	32.6	.....	42	20.66	nnw.	4.5	.....	Few A.Cu., nw.
						500	954.4	31.4	.....	42	19.31	nnw.	5.7	.....	Light haze from noon to 4:00 p. m.
P. M.															
12:13	965.2	32.6	43	nnw.	4.0	676	935.6	29.4	1.14	42	17.22	nnw.	7.8	.....	
						750	927.8	28.7	.....	43	16.93	nnw.	8.7	.....	
						1,000	902.0	26.4	.....	48	16.53	nnw.	11.5	.....	
12:39	965.2	33.0	45	n.	3.6	1,076	894.5	25.7	0.92	50	16.52	nnw.	12.4	.....	1/10 A.Cu., nw.
						1,250	877.3	26.2	.....	38	12.93	nnw.	11.8	0	
						1,500	852.7	26.9	.....	21	7.44	nnw.	10.9	.....	
12:52	965.2	33.2	46	n.	3.6	1,586	846.0	27.1	−0.28	16	5.74	nnw.	10.7	.....	
						1,750	828.3	25.8	.....	15	4.98	nnw.	10.5	330	
						2,000	805.0	24.1	.....	13	3.90	nw.	10.2	460	
						2,250	782.6	22.4	.....	12	3.25	nw.	9.9	.....	
1:53	965.5	32.1	45	n.	4.5	2,239	781.5	22.3	0.69	12	3.23	nw.	9.9	760	
						2,500	760.0	20.0	.....	17	3.97	nw.	11.4	.....	
						2,750	738.7	17.6	.....	23	4.63	nw.	13.0	.....	
						3,000	717.7	15.2	.....	28	4.84	nw.	14.6	.....	
2:11	965.6	32.2	44	n.	4.9	3,082	710.4	14.4	0.96	30	4.92	nw.	15.1	.....	Few A.Cu., nw.
						3,250	697.0	13.0	.....	32	4.79	nw.	15.4	.....	
						3,500	676.1	10.8	.....	34	4.40	nw.	15.8	.....	
						3,750	656.0	8.7	.....	37	4.16	nw.	16.3	.....	
						4,000	636.2	6.6	.....	40	3.90	nw.	16.7	.....	
						4,250	617.0	4.4	.....	42	3.52	nw.	17.1	.....	
						4,500	597.8	2.2	.....	45	3.22	nw.	17.6	2,090	
2:31	965.9	32.2	43	n.	5.4	4,573	592.1	1.6	0.83	46	3.16	nw.	17.7	.....	
						4,500	597.8	2.2	.....	46	3.29	nw.	17.7	.....	
						4,250	616.0	4.2	.....	47	3.88	nw.	17.7	.....	
						4,000	634.7	6.2	.....	48	4.55	wnw.	17.6	.....	
						3,750	654.0	8.2	.....	49	5.33	wnw.	17.6	.....	2/10 A.Cu., nw.; 3/10 St.Cu., wnw.
5:10	966.6	30.0	39	nne.	4.5	3,563	667.2	9.7	0.72	50	6.02	wnw.	17.6	.....	
						3,500	674.2	10.2	.....	49	6.10	wnw.	17.2	3,000	7/10 St.Cu., wnw.
						3,250	694.9	12.0	.....	47	6.59	wnw.	15.8	5,000	
						3,000	715.8	13.8	.....	44	6.94	wnw.	14.4	.....	
						2,750	737.8	15.6	.....	41	7.27	nw.	13.0	.....	
						2,500	760.0	17.4	.....	39	7.75	nw.	11.5	.....	
6:08	967.3	27.5	46	n.	3.1	2,342	773.9	18.5	0.90	37	7.88	nw.	10.6	.....	Rain from 6:09 to 6:26 p. m.
						2,250	782.6	19.3	.....	34	7.61	nw.	11.5	1,300	
						2,000	805.0	21.6	.....	26	6.71	nw.	14.0	.....	9/10 St.Cu., wnw.
						1,750	828.3	23.9	.....	18	5.34	nnw.	16.4	9,500	
6:22	967.3	27.4	46	nne.	2.7	1,568	846.0	25.5	−2.08	12	3.92	nnw.	18.2	.....	
						1,500	852.7	24.1	.....	11	3.30	nnw.	18.3	.....	Thunder 6:23 p. m. in north.
6:24	967.4	27.3	48	nne.	2.7	1,356	866.9	21.1	0.70	10	2.50	n.	18.5	0	
						1,250	877.3	21.8	.....	15	4.70	n.	17.0	.....	
						1,000	903.0	23.6	.....	26	7.57	n.	13.5	.....	
6:33	967.4	27.4	45	nne.	2.7	786	925.6	25.1	0.46	35	11.15	n.	10.5	.....	
						750	929.3	25.2	.....	36	11.54	n.	9.7	.....	
						500	955.4	26.4	.....	46	15.84	n.	4.4	.....	
6:41	967.5	26.9	50	n.	2.2	396	967.5	26.9	.....	50	17.72	n.	2.2	.....	9/10 St.Cu., wnw.

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A. M.															
6:36	968.6	20.5	60	ssw.	8.0	396	968.6	20.5	.....	60	14.47	ssw.	8.0	.....	7/10 St.Cu., nnw.
						500	957.1	20.9	.....	55	13.60	ssw.	11.8	.....	
6:42	968.6	20.7	58	ssw.	8.9	749	930.0	21.9	−0.30	43	11.30	ssw.	21.0	0	
						1,000	902.8	21.3	.....	43	10.89	ssw.	17.9	.....	5/10 St.Cu., nnw.
						1,250	877.2	20.6	.....	43	10.44	sw.	14.7	920	
7:13	968.5	21.2	55	ssw.	8.0	1,492	853.4	20.0	0.26	43	10.05	sw.	11.7	1,300	
						1,500	852.4	20.0	.....	43	10.05	sw.	11.8	.....	2/10 St.Cu., nw.
						1,750	828.0	19.1	.....	35	7.73	wsw.	14.9	.....	
						2,000	804.2	18.3	.....	27	5.68	w.	18.0	.....	
7:26	968.4	21.4	53	s.	8.0	2,017	892.6	18.2	0.34	26	5.43	w.	18.2	2,500	
						2,250	781.0	16.8	.....	31	5.93	wnw.	11.3	.....	Few St.Cu., wnw.
8:35	968.0	24.7	47	sw.	8.9	2,354	771.8	16.1	0.62	34	6.22	wnw.	8.3	2,900	Cloudless.
						2,500	758.9	15.0	.....	36	6.14	wnw.	8.5	4,800	
						2,750	736.8	13.1	.....	39	5.88	wnw.	9.0	3,600	
						3,000	715.0	11.3	.....	43	5.76	wnw.	9.4	.....	
						3,250	694.2	9.4	.....	46	5.42	wnw.	9.8	.....	
						3,500	673.8	7.5	.....	49	5.08	wnw.	10.2	.....	
9:03	967.9	25.0	45	sw.	8.9	3,707	656.2	6.0	0.76	52	4.86	wnw.	10.6	.....	
						3,500	673.8	7.6	.....	49	5.12	wnw.	10.1	.....	
						3,250	694.2	9.5	.....	46	5.46	wnw.	9.6	.....	
						3,000	715.0	11.5	.....	43	5.84	w.	9.0	3,000	
						2,750	736.8	13.4	.....	40	6.15	w.	8.5	.....	
						2,500	758.9	15.3	.....	37	6.43	w.	7.9	2,600	
9:55	967.3	26.7	43	sw.	9.8	2,352	771.8	16.5	0.62	35	6.57	w.	7.6	2,200	
						2,250	781.0	17.1	.....	32	6.24	w.	8.8	.....	
						2,000	804.2	18.7	.....	26	5.61	w.	11.7	2,000	
						1,750	827.8	20.2	.....	20	4.74	wsw.	14.7	.....	Few Ci., nnw.
10:55	966.6	28.0	40	sw.	7.6	1,560	845.4	21.4	−0.53	15	3.82	wsw.	16.9	1,500	
						1,500	851.8	21.1	.....	21	5.26	wsw.	16.6	.....	
11:05	966.5	29.2	40	sw.	9.8	1,256	876.0	19.8	0.89	41	9.47	sw.	15.5	640	
						1,250	876.8	20.3	.....	41	9.77	sw.	15.4	.....	
						1,000	902.4	22.1	.....	43	11.44	sw.	14.8	.....	
11:17	966.3	28.6	41	wsw.	10.3	795	923.4	23.9	1.23	44	13.05	sw.	14.3	.....	
						750	928.4	24.5	.....	43	13.22	sw.	13.6	0	
						500	955.0	27.5	.....	40	14.69	wsw.	9.6	.....	
11:24	966.3	28.8	38	wsw.	8.0	396	966.3	28.8	.....	38	15.05	wsw.	8.0	.....	1/10 Ci., nnw.

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P. M.															
12:02	965.9	30.3	37	sw.	9.4	396	965.9	30.3	.....	37	15.98	sw.	9.4	.....	1/10 Ci, nnw.
						500	954.9	28.8	.....	38	15.05	sw.	10.3	.....	
						750	928.0	25.3	.....	39	12.58	sw.	12.4	.....	
12:12	965.7	30.4	36	sw.	8.9	795	923.2	24.7	1.40	39	12.14	sw.	12.8	0	
						1,000	901.8	23.3	.....	40	11.44	sw.	14.7	.....	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, June, 1918*—Continued.

June 13, 1918 (No. 2)—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
						1,250	876.0	21.5		40	10.26	wsw.	17.1	500	
						1,500	851.0	19.8		41	9.47	wsw.	19.5		
12:32	965.3	30.6	34	sw.	9.4	1,507	850.0	19.0	0.70	41	9.01	wsw.	20.5		
12:37	965.2	30.6	34	wsw.	12.5	1,606	840.4	21.6	−2.63	26	6.71	wsw.	15.5		
12:39	965.2	30.6	34	wsw.	11.6	1,655	835.6	20.0	3.26	27	6.31	wsw.	15.7	1,280	
12:44	965.1	30.9	32	sw.	10.7	1,670	834.0	20.9	−6.00	24	5.93	wsw.	12.7		
						1,750	826.7	20.3		26	6.19	wsw.	11.8		1/10 Cl.Cu., nw.; 3/10 A. Cu., nw.
						2,000	802.8	18.3		32	6.73	wsw.	9.0		7/10 Cl.St., nw.; 1/10 A.Cu., nw.;
1:21	964.7	32.0	31	wsw.	9.4	2,018	800.9	18.2	0.78	33	6.90	wsw.	8.8	1,000	2/10 St.Cu., nw.
						2,250	779.2	17.2		32	6.28	wsw.	10.1		
						2,500	756.6	16.0		32	5.82	wsw.	11.4	1,700	
						2,750	735.0	14.9		31	5.25	wsw.	12.8		
1:50	964.6	32.2	30	wsw.	8.9	2,853	725.9	14.4	0.46	31	5.08	wsw.	13.4		
						3,000	713.3	13.0		32	4.79	wsw.	13.3	2,000	
						3,250	692.2	10.7		35	4.50	w.	13.2		
						3,500	671.8	8.4		37	4.08	w.	13.0		
1:57	964.5	32.4	30	sw.	9.8	3,566	666.4	7.8	0.84	38	4.02	w.	13.0		
						3,500	671.8	8.3		38	4.16	w.	12.8		
						3,250	692.2	10.2		37	4.61	w.	11.9		
						3,000	713.3	12.1		37	5.22	wsw.	11.0		
						2,750	735.0	14.0		36	5.75	wsw.	10.2		
2:13	964.3	32.4	29	wsw.	8.0	2,732	736.5	14.1	0.64	36	5.79	wsw.	10.1	1,500	
						2,500	756.6	15.6		35	6.20	wsw.	10.6		
						2,250	779.2	17.2		33	6.47	wsw.	11.1	1,320	
						2,000	802.8	18.8		32	6.94	wsw.	11.6		
2:36	964.1	32.9	30	wsw.	8.0	1,984	804.0	18.9	−0.49	32	6.99	wsw.	11.6		
2:37	964.1	32.9	30	wsw.	8.5	1,821	819.7	18.1	0.79	34	7.06	wsw.	11.6		
						1,750	826.7	18.7		37	7.98	wsw.	12.3		
2:46	964.0	33.2	29	sw.	7.2	1,556	845.2	20.2	1.00	45	10.66	sw.	14.3	540	
						1,500	851.0	20.8		44	10.81	sw.	14.0		
						1,250	875.4	23.2		40	11.39	sw.	12.8	0	
						1,000	900.5	25.7		35	11.56	sw.	11.6		
3:09	963.7	32.2	32	wsw.	4.9	764	924.8	28.1	1.22	31	11.79	sw.	10.5		
						750	926.6	28.3		31	11.93	sw.	10.3		
						500	953.0	31.3		32	14.63	sw.	6.5		
3:15	963.6	32.6	32	sw.	4.9	396	963.6	32.6		32	15.74	sw.	4.9		3/10 Cl.St., nw.; 4/10 A.Cu., nw.

June 13, 1918 (No. 3).

P. M.															
3:57	963.1	33.2	28	ssw.	5.8	396	963.1	33.2		28	14.25	ssw.	5.8		3/10 Cl.St., nw.; 4/10 A. Cu., nw.
						500	952.0	32.3		27	13.06	ssw.	6.7		
						750	925.8	30.1		25	10.67	ssw.	9.1		
4:05	963.1	33.4	27	ssw.	5.8	800	919.7	29.6	0.87	25	10.37	ssw.	9.7		
						1,000	899.7	27.9		29	10.90	ssw.	10.1		
						1,250	874.5	25.7		34	11.23	sw.	10.7	0	
						1,500	850.0	23.5		39	11.29	sw.	11.3	C20	
						1,750	826.2	21.4		44	11.22	sw.	11.9		
						2,000	802.6	19.2		49	10.90	wsw.	12.4		Solar halo, 22° radius from 4:35 to
5:05	962.5	32.6	33	ssw.	4.9	2,121	790.9	18.1	0.88	51	10.59	wsw.	12.7	1,200	4:57 p. m.
						2,250	779.0	17.4		50	9.94	wsw.	13.0		
						2,500	756.4	16.1		47	8.60	wsw.	13.4		
						2,750	734.5	14.8		44	7.41	w.	13.9		
						3,000	713.2	13.4		42	6.46	w.	14.4		
5:17	962.4	32.7	34	ssw.	4.5	3,141	701.2	12.7	0.53	40	5.88	w.	14.7	2,300	
						3,250	692.2	11.9		42	5.85	w.	14.9		
						3,500	671.6	9.9		48	5.86	w.	15.5		
						3,750	652.0	8.0		53	5.69	wnw.	16.0		
						4,000	632.6	6.1		59	5.56	wnw.	16.5		4/10 Cl.St.,nw.; 1/10 St. Cu., nw.;
						4,250	613.5	4.2		64	5.28	wnw.	17.0	3,300	5/10 A.St., nw.
5:51	962.2	31.5	39	ssw.	3.6	4,289	610.6	3.9	0.74	65	5.25	wnw.	17.1		
						4,250	613.5	4.2		65	5.36	wnw.	17.1		
						4,000	632.6	6.0		62	5.80	wnw.	16.9		
						3,750	652.0	7.9		59	6.28	wnw.	16.8		
						3,500	671.6	9.7		56	6.74	w.	16.6		
						3,250	692.2	11.5		54	7.33	w.	16.5	2,200	
						3,000	713.2	13.3		51	7.79	w.	16.3		
6:17	961.9	30.5	42	ssw.	4.5	2,813	726.6	14.5	0.86	49	8.09	w.	16.2		
						2,750	734.5	15.3		51	8.86	w.	15.8		
						2,500	756.4	17.4		55	10.93	wsw.	14.6		
6:28	961.8	30.4	41	ssw.	5.4	2,423	763.2	18.1	0.54	57	11.84	wsw.	14.3	1,170	
						2,250	779.0	19.0		54	11.86	wsw.	13.5		
						2,000	801.8	20.4		50	11.98	wsw.	12.3		
						1,750	825.3	21.7		45	11.68	sw.	11.0	0	3/10 Cl.St., nw.; 6/10 A.St., nw.;
						1,500	849.2	23.1		41	11.59	sw.	9.8		few St.Cu., nw.
6:43	961.7	29.9	41	ssw.	5.4	1,493	849.6	23.1	0.98	41	11.59	sw.	9.8		
						1,250	873.4	25.5		36	11.75	sw.	10.7		
						1,000	898.6	27.9		31	11.65	sw.	11.6		
6:57	961.5	30.0	40	ssw.	5.4	839	914.8	29.5	0.05	28	11.55	sw.	12.2		
						750	924.2	29.5		30	12.37	sw.	10.7		
						500	950.5	29.7		37	15.44	ssw.	6.6		
7:10	961.4	29.7	40	ssw.	4.9	396	961.4	29.7		40	16.69	ssw.	4.9		5/10 Cl.St., nw.; 1/10 St.Cu., nw.

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A. M.															
6:34	961.3	20.5	82	s.	4.0	396	961.3	20.5		82	19.78	s.	4.0		2/10 Cl.Cu., w.; 2/10 Cl.St., w.; 1/10
						500	950.0	21.1		74	18.52	s.	7.3		St.Cu., sw.
						750	923.0	22.5		54	14.72	ssw.	15.4		
6:40	961.4	21.0	80	s.	4.9	794	918.4	22.7	−0.55	50	13.80	ssw.	16.8	0	
						1,000	897.1	21.1		56	14.02	sw.	14.9		
7:08	961.6	22.3	74	s.	4.0	1,048	892.1	20.7	0.79	57	13.92	sw.	14.5	0	
						1,250	872.2	19.4		65	14.64	sw.	15.3		2/10 Cl.Cu., w.; 3/10 A.Cu., w.
8:28	962.1	25.4	58	sw.	5.4	1,343	862.9	18.8	0.58	69	14.97	sw.	5.6	0	
						1,250	872.2	19.3		68	15.23	sw.	5.7		

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, June, 1918*—Continued.

June 14, 1918—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*volts.*	
						1,000	897.7	20.6	.....	65	15.78	ssw.	5.9	.....	
9:19	962.0	26.6	58	ssw.	3.6	787	920.0	21.7	1.25	63	16.35	s.	6.1	0	
						750	924.0	22.0	.....	63	16.87	s.	5.9	.....	
						500	951.0	25.3	.....	59	19.03	s.	4.3	.....	
9:24	962.0	26.6	58	s.	3.6	396	962.0	26.6	.....	58	20.20	s.	3.6	.....	Few Cl.Cu., w.

June 16, 1918.

A. M.															
6:27	968.4	25.7	52	sw.	4.5	396	968.4	25.7	.....	52	17.18	sw.	4.5	.....	2/10 Cl.St., w.; Few St.Cu., wsw.
						500	957.4	26.0	.....	47	15.80	sw.	8.6	.....	
						750	930.2	26.7	.....	36	12.61	wsw.	18.4	.....	
6:32	968.4	26.0	52	sw.	4.5	774	927.8	26.8	−0.29	35	12.33	wsw.	19.3	.....	
						1,000	904.5	27.3	.....	30	10.89	w.	22.6	.....	
6:54	968.6	26.0	53	sw.	4.5	1,174	886.9	27.7	−0.22	26	9.66	w.	25.2	.....	
						1,250	879.6	27.4	.....	25	9.13	w.	24.2	0	
						1,500	855.0	26.2	.....	23	7.82	wsw.	20.9	.....	
						1,750	831.0	25.1	.....	20	6.37	wsw.	17.6	.....	
						2,000	807.8	23.9	.....	18	5.34	wsw.	14.3	.....	
						2,250	785.1	22.8	.....	16	4.44	sw.	11.0	540	
8:04	969.2	27.7	52	wsw.	4.0	2,423	770.0	22.0	0.46	14	3.70	sw.	8.7	.....	
						2,500	763.0	21.2	.....	16	4.03	sw.	8.9	.....	2/10 Cl.St., w.
						2,750	741.2	18.6	.....	20	4.29	sw.	9.6	.....	
						3,000	719.9	15.9	.....	25	4.52	sw.	10.3	.....	
						3,250	698.9	13.3	.....	30	4.58	sw.	11.0	1,350	
8:51	969.2	28.9	48	wsw.	5.4	3,443	682.9	11.3	0.94	34	4.55	sw.	11.5	.....	
						3,250	698.9	12.9	.....	32	4.76	sw.	11.4	1,320	
						3,000	719.9	15.0	.....	28	4.77	sw.	11.2	1,040	
						2,750	741.2	17.1	.....	25	4.88	sw.	11.1	.....	
						2,500	763.0	19.2	.....	22	4.90	sw.	10.9	890	
						2,250	785.1	21.3	.....	19	4.81	sw.	10.8	.....	
						2,000	807.8	23.4	.....	15	4.32	sw.	10.6	.....	3/10 Cl.St., w.
9:30	969.0	30.0	42	sw.	6.7	1,808	825.9	25.0	0.54	13	4.12	sw.	10.5	.....	
						1,750	831.2	25.3	.....	14	4.52	sw.	10.9	0	
						1,500	855.8	26.7	.....	16	5.61	sw.	12.7	.....	
						1,250	880.4	28.0	.....	18	6.81	wsw.	14.5	.....	
9:43	969.0	30.8	42	wsw.	6.3	1,183	886.9	28.4	0.04	19	7.35	wsw.	15.0	.....	
						1,000	905.0	28.5	.....	25	9.73	wsw.	13.5	.....	1/10 Cl.St., w.
						750	931.0	28.6	.....	33	12.92	wsw.	11.4	.....	
10:04	968.9	31.4	40	wsw.	8.0	672	939.4	28.6	1.05	35	13.70	wsw.	10.8	.....	
						500	958.2	30.4	.....	38	16.50	wsw.	8.6	.....	
10:08	968.9	31.5	40	wsw.	7.2	396	968.9	31.5	.....	40	18.50	wsw.	7.2	.....	1/10 Cl.St., w.

June 18, 1918.

A. M.															
6:27	967.9	23.0	87	sse.	3.6	396	967.9	23.0	.....	87	24.45	sse.	3.6	.....	2/10 Cl., nw.; Few Cl.St., nw.
						500	957.0	24.0	.....	71	21.19	s.	6.3	.....	
6:36	967.9	24.2	83	sse.	3.6	750	929.8	26.2	−0.90	36	12.25	wsw.	12.6	.....	
6:42	967.9	25.1	78	sse.	3.6	813	923.2	28.3	−3.02	28	10.77	w.	19.6	.....	1/10 Cl., nw.; 2/10 Cl.St., nw.
						1,000	904.0	27.0	.....	31	11.05	w.	17.7	.....	
						1,250	878.8	25.2	.....	34	10.90	w.	15.2	.....	
						1,500	854.3	23.5	.....	38	11.00	wsw.	12.6	.....	
						1,750	830.4	21.7	.....	42	10.90	wsw.	10.1	0	
7:42	967.9	29.3	55	ssw.	5.4	1,757	829.5	21.7	0.70	42	10.90	wsw.	10.0	.....	
						2,000	806.9	19.4	.....	49	11.04	wsw.	9.8	515	4/10 Cl., nw.; 1/10 Cl.St., nw.; 1/10 A.Cu., wsw.
						2,250	783.6	17.1	.....	56	10.92	wsw.	9.7	.....	
8:18	968.0	29.3	49	ssw.	4.5	2,376	772.0	15.9	0.94	60	10.84	wsw.	9.6	590	
						2,500	761.0	14.7	.....	64	10.71	wsw.	9.3	.....	
						2,750	739.0	12.3	.....	73	10.45	wsw.	8.6	.....	
						3,000	717.4	10.0	.....	82	10.07	wsw.	7.9	1,200	
8:53	968.2	31.3	47	ssw.	3.6	3,186	701.4	8.2	0.96	89	9.67	wsw.	7.4	.....	
						3,000	717.4	10.0	.....	82	10.07	wsw.	7.8	.....	
						2,750	739.0	12.4	.....	73	10.51	wsw.	8.4	1,040	
						2,500	761.0	14.8	.....	64	10.77	wsw.	8.9	.....	
9:08	968.2	31.5	48	wsw.	1.3	2,411	769.0	15.7	0.89	61	10.88	wsw.	9.1	.....	
						2,250	783.6	17.1	.....	56	10.92	wsw.	9.6	0	
						2,000	806.9	19.3	.....	48	10.75	w.	10.4	.....	
						1,750	830.4	21.6	.....	41	10.58	w.	11.1	.....	
9:25	968.1	31.6	45	ene.	1.3	1,724	832.7	21.8	−1.14	40	10.45	w.	11.2	.....	
						1,500	854.3	21.5	.....	49	12.57	wnw.	7.6	.....	
9:31	968.0	31.6	45	n.	1.3	1,400	858.2	21.5	0.97	51	13.08	wnw.	6.9	.....	
						1,250	878.6	23.5	.....	50	14.48	w.	5.8	.....	
						1,000	903.9	25.5	.....	49	15.99	wsw.	4.5	.....	
						750	930.0	28.4	.....	48	18.58	sw.	3.2	.....	
						500	957.0	30.8	.....	47	20.88	s.	1.8	.....	
9:36	968.0	31.8	47	s.	1.3	396	968.0	31.8	.....	47	22.10	s.	1.3	.....	3/10 Cl., nw.; 3/10 Cl.St., nw.; Few A.Cu., w.

June 19, 1918.

A. M.															
6:38	965.9	19.7	65	sse.	6.7	396	965.9	19.7	.....	65	14.92	sse.	6.7	.....	8/10 St.Cu., wsw.
						500	954.4	20.2	.....	64	15.16	sse.	8.2	.....	
						750	927.4	21.3	.....	62	15.70	s.	11.9	.....	
6:47	965.9	20.0	63	sse.	5.4	801	921.7	21.5	−0.44	62	15.90	s.	12.6	0	
						1,000	901.0	24.1	.....	49	14.71	ssw.	14.4	.....	
6:56	965.9	20.5	63	se.	6.7	1,215	879.1	27.0	−1.33	34	12.12	wsw.	16.3	.....	
						1,250	876.0	26.7	.....	35	12.26	wsw.	16.1	1,200	
						1,500	851.5	24.6	.....	37	11.45	wsw.	14.5	.....	
						1,750	827.2	22.6	.....	39	10.70	wsw.	13.0	.....	
						2,000	803.9	20.5	.....	42	10.13	wsw.	11.4	1,800	
						2,250	781.0	18.4	.....	44	9.31	wsw.	9.9	2,300	
						2,500	758.6	16.3	.....	47	8.71	wsw.	8.3	.....	6/10 A.Cu., wsw.
7:41	965.9	22.6	57	se.	7.6	2,612	748.4	15.4	0.83	48	8.40	wsw.	7.6	2,600	
						2,750	736.6	14.2	.....	49	7.93	wsw.	7.4	.....	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, June, 1918*—Continued.

June 19, 1918—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
						3,000	715.4	12.0	.....	52	7.30	wsw.	6.9	3,700	
						3,250	694.5	9.9	.....	54	6.59	wsw.	6.5	4,000	
						3,500	674.0	7.7	.....	57	5.99	wsw.	6.1	4,200	
						3,750	653.3	5.6	.....	59	5.37	wsw.	5.7	3,000	2/10 Cl., w.; 3/10 A. Cu., wsw.
9:08	965.9	24.4	56	sse.	5.8	3,849	645.2	4.7	0.84	60	5.12	wsw.	5.5	.....	
						3,750	653.3	5.5	.....	60	5.42	wsw.	6.2	.....	
						3,500	674.0	7.5	.....	60	6.22	wsw.	8.0	.....	
						3,250	694.5	9.6	.....	61	7.29	wsw.	9.9	.....	
						3,000	715.4	11.6	.....	61	8.33	wsw.	11.7	2,800	
9:42	965.9	25.4	53	se.	4.5	2,820	730.2	13.1	0.86	61	9.20	wsw.	13.0	.....	1/10 Cl., w.; 7/10 A.Cu., wsw.
						2,750	736.6	13.7	.....	59	9.25	wsw.	12.9	.....	
						2,500	758.6	15.8	.....	54	9.69	wsw.	12.7	2,300	
						2,250	781.0	18.0	.....	48	9.91	wsw.	12.5	.....	
						2,000	803.9	20.1	.....	43	10.12	wsw.	12.3	.....	
10:04	965.9	26.2	52	se.	4.0	1,932	810.2	20.7	0.89	41	10.01	wsw.	12.2	2,000	
						1,750	827.2	22.3	.....	38	10.23	sw.	11.6	.....	
						1,500	851.5	24.5	.....	33	10.15	ssw.	10.8	.....	
						1,250	876.0	26.8	.....	29	10.22	s.	10.0	.....	
10:22	965.8	26.4	53	se.	3.6	1,201	880.8	27.2	−1.82	28	10.10	s.	9.8	700	
						1,000	901.0	23.5	.....	44	12.74	sse.	7.9	.....	
10:27	965.7	26.5	53	se.	4.5	882	913.4	21.4	0.48	53	13.51	se.	6.8	.....	
						750	927.4	22.0	.....	57	15.07	se.	6.8	.....	
10:30	965.7	26.6	53	ese.	3.1	588	944.9	22.8	1.98	61	16.93	se.	6.8	.....	
						500	954.4	24.5	.....	57	17.53	se.	5.1	.....	
10:32	965.7	26.6	53	ese....	3.1	396	965.7	26.6	.....	53	18.50	ese.	3.1	.....	3/10 Ci.St., w.; 2/10 A.Cu., wsw.

June 20, 1918.

P. M.															
12:58	962.8	27.4	61	ene.	4.9	396	962.8	27.4	.....	61	22.27	ene.	4.9	.....	4/10 A.Cu., wnw.; 5/10 St.Cu., wnw.
						500	952.0	26.5	.....	62	21.47	ene.	6.0	.....	Rain from 12:49 to 12:58 p. m.
1:03	962.8	27.8	60	ene.	5.4	726	927.4	24.5	0.88	65	19.99	ne.	8.4	.....	
						750	925.1	24.3	.....	66	20.06	ne.	8.3	.....	
1:07	962.9	27.8	60	ene.	4.0	822	917.5	23.5	1.04	70	20.27	nne.	8.0	0	
						1,000	899.0	23.1	.....	64	18.09	nne.	8.1	.....	
						1,250	873.9	22.6	.....	55	15.09	n.	8.2	1,390	
						1,500	849.5	22.0	.....	46	12.16	nnw.	8.4	1,500	2/10 A.Cu., wnw.; 7/10 St.Cu., wnw.
1:44	963.3	28.4	58	ene.	2.7	1,596	839.8	21.8	0.22	43	11.23	nnw.	8.4	1,200	Rain from 2:18 to 2:30 p. m.
						1,750	825.0	20.8	.....	43	10.57	nnw.	8.8	1,200	
						2,000	801.5	19.1	.....	44	9.73	nw.	9.5	.....	
2:18	963.4	27.4	64	ne.	1.3	2,213	781.9	17.7	0.65	45	9.11	nw.	10.1	.....	
						2,000	801.5	19.1	.....	43	9.51	nw.	8.3	(*)	* Over 10,000 volts.
						1,750	825.0	20.7	.....	41	10.01	nw.	6.2	(*)	
						1,500	849.5	22.3	.....	39	10.50	nw.	4.0	(*)	
2:34	963.3	27.4	71	e.	1.8	1,449	854.2	22.6	0.17	39	10.70	nw.	3.6	.....	
						1,250	873.9	22.9	.....	47	13.13	nnw.	3.3	.....	
						1,000	899.0	23.5	.....	58	16.80	nne.	2.9	.....	
2:38	963.2	27.7	67	e.	2.2	761	924.1	23.8	1.10	65	19.17	ne.	2.7	.....	
						750	925.1	23.9	.....	65	19.28	ne.	2.7	.....	
						500	952.0	26.6	.....	65	22.64	ene.	2.3	.....	
2:40	963.2	27.8	65	e.	2.2	396	963.2	27.8	.....	65	24.29	e.	2.2	.....	2/10 A.Cu., wnw.; 5/10 St.Cu., wnw.

June 21, 1918.

A. M.															
6:30	969.1	18.5	70	n.	3.1	396	969.1	18.5	.....	70	14.91	n.	3.1	.....	3/10 Cl., wnw.
						500	957.8	18.6	.....	61	13.07	n.	7.2	.....	
6:37	969.1	18.7	68	n.	3.1	687	936.9	18.7	−0.07	44	9.49	n.	14.7	0	
						750	930.1	18.4	.....	43	9.10	n.	14.7	.....	
						1,000	903.3	17.0	.....	37	7.17	n.	11.3	.....	
6:54	969.2	19.2	63	n.	2.7	1,149	887.7	16.2	0.54	34	6.26	n.	9.7	330	
						1,250	877.5	15.8	.....	34	6.10	n.	11.4	.....	
						1,500	852.0	14.7	.....	33	5.52	nnw.	15.6	.....	
7:06	969.2	19.6	62	n.	3.1	1,622	839.4	14.2	0.42	32	5.18	nnw.	17.6	1,280	
						1,750	826.5	14.1	.....	28	4.51	nnw.	17.9	.....	
						2,000	802.4	13.8	.....	20	3.16	nw.	18.3	.....	
7:21	969.2	20.2	59	nne.	3.1	2,076	795.3	13.7	0.11	17	2.67	nw.	18.5	.....	
						2,250	779.2	12.9	.....	14	2.08	nw.	18.5	2,500	
						2,500	756.2	11.7	.....	9	1.24	nw.	18.5	.....	
						2,750	734.0	10.5	.....	5	0.64	nw.	18.4	.....	
7:43	969.2	20.6	53	nne.	2.7	2,966	714.9	9.5	0.47	*1	0.12	nw.	18.4	4,000	
						3,000	711.9	9.3	.....	*1	0.12	nw.	18.6	.....	
						3,250	690.7	7.5	.....	*1	0.10	nw.	19.7	5,300	
						3,500	669.8	5.8	.....	*1	0.09	nw.	20.8	.....	Few Cl.St., wnw.
8:14	969.3	21.9	47	nne.	3.1	3,585	662.8	5.2	0.62	1	0.09	nw.	21.2	6,000	
						3,500	669.8	5.7	.....	*1	0.09	nw.	20.6	.....	
						3,250	690.0	7.1	.....	*1	0.10	nw.	19.0	.....	
						3,000	711.2	8.5	.....	*1	0.11	nw.	17.3	.....	
8:49	969.5	23.3	42	nne.	4.0	2,956	714.9	8.7	0.41	*1	0.11	nw.	17.0	4,000	
						2,750	733.0	9.5	.....	*1	0.12	nw.	17.0	.....	
						2,500	755.7	10.6	.....	*1	0.13	nnw.	16.9	.....	
						2,250	778.8	11.6	.....	*1	0.14	nnw.	16.8	2,400	
9:16	969.6	23.5	40	n.	4.5	2,102	792.2	12.2	−0.35	*1	0.14	nnw.	16.8	.....	
						2,000	802.4	11.8	.....	6	0.83	nnw.	16.4	.....	
						1,750	826.5	11.0	.....	20	2.63	nnw.	15.5	1,280	
9:31	969.6	23.7	36	n.	5.4	1,557	845.8	10.3	0.97	30	3.76	nnw.	14.8	.....	
						1,500	852.0	10.9	.....	31	4.04	nnw.	14.6	.....	
						1,250	878.3	13.3	.....	35	5.34	nnw.	13.9	.....	
						1,000	904.0	15.7	.....	38	6.78	n.	13.3	380	
						750	931.0	18.1	.....	42	8.72	n.	12.6	.....	
9:55	969.6	23.2	40	n.	5.4	693	936.9	18.7	1.78	43	9.28	n.	12.4	0	
						500	958.2	22.1	.....	35	9.31	n.	8.7	.....	
10:02	969.6	24.0	31	n.	6.7	396	969.6	24.0	.....	31	9.25	n.	6.7	.....	Few Cl.St., wnw.

* Estimated.

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, June, 1918*—Continued.

June 22, 1918.

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Electric potential.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
7:21	972.2	15.6	69	ese.	5.8	396	972.2	15.6	.....	69	12.23	ese.	5.8	.....	2/10 Cl.St.,wnw.; 5/10 A.Cu., wnw.
						500	960.3	14.4	.....	72	11.81	ese.	6.6	.....	
						750	932.5	11.7	.....	79	10.86	se.	8.5	.....	
7:31	972.3	16.3	66	ese.	5.4	818	924.9	10.9	1.12	81	10.56	se.	9.0	818	
7:47	972.5	16.5	65	ese.	8.5	1,000	905.2	10.2	.....	80	9.96	ese.	7.8	1,200	
						1,075	896.9	9.9	0.39	80	9.76	ese.	7.3	.....	
						1,250	878.5	11.8	.....	48	6.64	e.	7.2	1,300	
8:18	972.5	16.6	60	ese.	7.2	1,359	867.0	13.0	−1.09	28	4.19	ene.	7.1	1,700	
						1,500	852.7	13.2	.....	26	3.96	e.	4.5	.....	4/10 Cl.St.,wnw.; 3/10 A.Cu.,wnw.
9:25	972.2	18.0	60	ese.	4.5	1,624	840.0	13.3	1.32	24	3.66	e.	2.2	.....	
						1,500	852.7	13.6	.....	23	3.58	e.	2.9	.....	
9:31	972.1	18.3	57	e.	4.9	1,369	865.8	14.0	−7.45	22	3.52	e.	3.7	.....	
9:37	972.1	18.6	58	e.	4.9	1,300	873.2	9.0	0.64	83	9.53	ese.	6.8	920	
						1,250	878.5	9.3	.....	83	9.73	ese.	6.8	1,500	
9:52	972.0	19.4	57	ese.	4.9	1,052	899.4	10.6	0.98	82	10.48	se.	6.6	1,350	
						1,000	905.2	11.1	.....	80	10.57	se.	6.6	.....	
						750	932.5	13.6	.....	73	11.37	se.	6.8	.....	
10:00	972.0	19.5	56	se.	3.1	666	941.8	14.4	1.85	70	11.48	se.	6.8	.....	Solar halo, 22° radius, began 10:00 a. m. and continued at end of flight.
						500	960.3	17.5	.....	61	12.20	se.	4.5	.....	7/10 Cl.St., wnw.; 1/10 A.Cu., wnw.
10:05	972.0	19.4	55	se.	3.1	396	972.0	19.4	.....	55	12.39	se.	3.1	.....	

June 23, 1918.

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Electric potential.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
6:38	965.3	19.6	56	sse.	4.5	396	965.3	19.6	.....	56	12.77	sse.	4.5	.....	10/10 St.Cu., w.
						500	953.5	19.6	.....	51	11.03	sse.	8.2	.....	
6:45	965.3	19.7	58	s.	4.9	749	926.4	19.7	−0.03	39	8.96	s.	17.2	0	
6:49	965.3	19.8	58	s.	4.9	894	911.0	18.7	0.09	50	10.78	s.	17.6	.....	
						1,000	899.9	18.3	.....	45	9.46	s.	16.8	.....	
						1,250	873.8	17.4	.....	34	6.76	ssw.	15.0	260	
7:04	965.2	20.0	56	s.	5.4	1,487	849.9	16.6	0.35	23	4.34	ssw.	13.2	620	
						1,500	848.4	16.6	.....	24	4.53	ssw.	13.1	.....	
						1,750	824.0	15.8	.....	39	7.00	sw.	12.0	.....	
7:19	965.1	20.0	59	s.	5.4	1,926	807.1	15.2	0.32	50	8.64	sw.	11.2	1,100	
						2,000	800.0	14.7	.....	50	8.36	sw.	11.0	2,000	
8:00	964.8	21.4	54	ssc.	6.3	2,254	776.0	12.8	0.73	52	7.69	wsw.	10.4	.....	3/10 A.Cu., w.; 7/10 St.Cu., w.
						2,500	753.5	11.0	.....	62	8.14	wsw.	9.0	2,500	
						2,750	731.4	9.1	.....	72	8.32	sw.	7.6	.....	
8:16	964.8	21.7	54	sse.	7.2	2,867	721.1	8.2	0.72	77	8.37	sw.	6.9	1,600	
						2,750	731.4	9.0	.....	73	8.38	sw.	7.6	.....	
						2,500	753.5	10.7	.....	65	8.37	sw.	9.2	.....	
						2,250	776.2	12.4	.....	58	8.35	sw.	10.8	.....	
8:40	964.8	22.0	54	s.	7.2	2,139	786.7	13.2	0.55	54	8.19	sw.	11.5	1,600	
						2,000	800.0	14.0	.....	52	8.31	sw.	12.2	.....	
						1,750	824.0	15.3	.....	48	8.34	sw.	13.5	.....	
8:57	964.8	22.6	55	s.	7.6	1,596	838.9	16.2	0.65	46	8.47	sw.	14.3	1,020	
						1,500	848.4	16.8	.....	45	8.61	sw.	14.7	.....	
						1,250	873.4	18.5	.....	44	9.37	ssw.	15.9	.....	
9:13	964.7	23.2	54	s.	5.8	1,228	875.8	18.6	−0.88	44	9.43	ssw.	16.0	420	
9:16	964.7	23.2	55	s.	5.8	1,023	897.0	16.8	0.71	62	11.86	ssw.	17.7	.....	
						1,000	899.5	17.0	.....	62	12.02	ssw.	17.3	.....	
9:23	964.7	24.1	47	s.	9.8	771	923.8	18.6	1.36	62	13.29	ssw.	12.8	330	
						750	926.2	18.9	.....	61	13.32	ssw.	12.5	.....	
						500	953.0	22.3	.....	55	14.81	s.	9.3	.....	
9:29	964.7	23.7	52	s.	8.0	396	964.7	23.7	.....	52	15.24	s.	8.0	.....	7/10 A.Cu., w.; 1/10 St.Cu., w.

June 24, 1918.

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Electric potential.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
4:07	960.1	25.8	82	nnw.	4.5	396	960.1	25.8	.....	82	27.25	nnw.	4.5	.....	4/10 Cl.St., wnw.; 5/10 St.Cu., nw.
						500	948.9	24.6	.....	86	26.91	nnw.	5.6	.....	
4:27	960.1	26.0	79	nnw.	4.5	720	925.3	22.5	1.02	94	25.62	nnw.	7.8	.....	Altitude of St.Cu. base about 850 m.
						750	922.4	22.4	.....	93	25.19	nnw.	7.9	.....	
						1,000	896.1	21.6	.....	83	21.41	nw.	9.0	.....	
4:42	960.1	26.4	78	nnw.	3.1	1,087	887.1	21.3	0.33	79	20.01	nw.	9.4	.....	
						1,250	870.0	20.2	.....	82	19.42	nw.	9.6	0	
						1,500	845.2	18.5	.....	87	18.52	nw.	9.9	.....	
						1,750	821.5	16.7	.....	91	17.30	nw.	10.2	.....	
5:01	960.1	26.1	80	nnw.	3.6	1,787	818.0	16.5	0.09	92	17.27	nw.	10.2	730	
5:14	960.3	26.3	79	nnw.	2.7	1,800	816.8	17.5	−7.09	73	14.60	nw.	13.5	.....	5/10 A.Cu., nw.; 4/10 St.Cu., nnw
						2,000	798.2	16.1	.....	78	14.27	nw.	13.1	.....	
						2,250	774.9	14.3	.....	84	13.69	nw.	12.6	1,100	
5:20	960.4	26.5	78	nnw.	2.7	2,455	753.7	12.6	0.72	90	13.13	nw.	12.2	.....	
						2,500	752.0	12.5	.....	90	13.04	nw.	12.2	.....	Thunder first heard in nw. at 5:20 p. m.
						2,750	730.6	11.0	.....	92	12.98	nw.	12.0	.....	
						3,000	709.5	9.4	.....	95	11.20	nw.	11.7	.....	
5:38	960.7	26.8	79	nnw.	3.1	3,142	697.2	8.5	0.55	96	10.66	nw.	11.6	.....	
						3,000	709.5	9.2	.....	97	11.29	nw.	11.9	.....	
						2,750	730.6	10.4	.....	97	12.23	nw.	12.4	.....	10/10 St., nnw.
						2,500	752.0	11.6	.....	98	13.39	nw.	12.9	.....	
						2,250	774.9	12.8	.....	99	14.63	nw.	13.4	.....	
5:56	961.0	26.2	79	nnw.	4.5	2,087	790.3	13.6	0.46	100	15.58	nw.	13.7	0	
						2,000	798.2	14.0	.....	100	15.98	nw.	13.3	.....	
						1,750	822.6	15.2	.....	100	17.27	nw.	12.1	(*)	* More than 10,000 volts. Rain began 6:00 p. m. and continued at end of flight.
						1,500	847.2	16.3	.....	100	18.53	nnw.	10.8	.....	Thunderstorms in sw., se., and ne.
						1,250	872.1	17.5	.....	100	20.00	nnw.	9.6	.....	
						1,000	897.9	18.6	.....	99	21.22	nnw.	8.4	.....	
						750	923.7	19.8	.....	99	22.87	n.	7.1	.....	
						500	950.0	20.9	.....	99	24.47	n.	5.9	.....	
6:09	961.2	21.4	99	n.	5.4	396	961.2	21.4	.....	99	25.24	n.	5.4	.....	Altitude of St. base about 1,000 m.

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, June, 1918*—Continued.

June 25, 1918.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Electric potential.	
				Dir	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
11:52	966.2	27.2	46	nne.	3.6	396	965.2	27.2	.....	46	16.60	nne.	3.6	.....	Cloudless.
						500	954.7	25.3	.....	40	12.90	n.	5.3	.....	
P. M.															
12:05	966.2	27.0	44	n.	4.0	601	943.9	23.4	1.85	35	10.07	nnw.	7.0	0	
						750	928.0	22.2	.....	41	10.98	nnw.	6.2	.....	
12:20	966.2	27.3	44	n.	3.1	831	919.3	21.5	0.88	43	11.03	nnw.	5.7	.....	
						750	928.0	22.3	.....	43	11.58	nnw.	6.0	.....	
12:45	966.2	27.8	43	n.	2.2	811	950.4	24.2	2.62	42	12.68	n.	6.6	.....	
						500	954.7	25.3	.....	42	13.55	n.	5.5	.....	
12:57	966.2	28.0	42	n.	2.7	396	966.2	28.0	.....	42	15.88	n.	2.7	.....	

June 26, 1918.

A. M.															
6:39	962.8	22.5	70	nw.	3.6	396	962.8	22.5	.....	70	19.08	nw.	3.6	.....	2/10 Ci.St., wsw.; 2/10 A.Cu., wnw.; 4/10 St.Cu., nw.
						500	951.2	23.0	.....	63	17.70	nw.	7.3	.....	
						750	924.5	24.4	.....	46	14.06	nw.	16.2	.....	
6:50	962.8	22.5	70	nw.	4.0	756	923.9	24.4	−0.36	46	14.06	nw.	16.4	0	
						1,000	898.2	23.5	.....	45	13.03	nw.	18.0	.....	
7:15	963.2	23.0	67	nw.	4.0	1,031	895.7	23.4	0.75	45	12.95	nw.	18.2	620	
						1,250	872.6	21.8	.....	45	11.33	nw.	18.1	.....	
						1,500	848.0	19.9	.....	45	10.26	nw.	18.1	.....	
						1,750	824.2	18.0	.....	45	9.23	nw.	18.0	.....	
7:25	963.4	23.2	68	nw.	4.5	1,803	819.1	17.6	0.66	45	9.06	nw.	18.0	1,300	
						2,000	800.8	16.5	.....	45	8.45	nw.	18.0	.....	
						2,250	777.8	15.3	.....	44	7.65	nw.	17.9	.....	
7:42	963.8	23.4	68	nw.	5.8	2,452	759.4	13.9	0.57	44	6.99	nw.	17.9	1,700	1/10 Ci.St., wsw.; 1/10 A.Cu., wnw.
						2,500	755.0	13.5	.....	44	6.81	nw.	17.6	.....	
						2,750	732.7	11.6	.....	45	6.15	nw.	16.1	.....	
						3,000	711.0	9.7	.....	46	5.53	wnw.	14.7	2,200	
						3,250	690.0	7.9	.....	47	5.01	wnw.	13.2	.....	
8:12	964.3	24.6	66	nw.	5.8	3,409	672.5	6.2	0.76	48	4.55	wnw.	11.9	2,700	1/10 Ci.St., wsw.; Few A.Cu., wnw.
						3,500	669.7	6.0	.....	48	4.49	wnw.	12.1	.....	
						3,750	649.5	4.1	.....	47	3.85	nw.	13.8	2,900	
8:33	964.5	24.4	67	nw.	2.7	3,916	636.2	2.9	0.76	46	3.46	nw.	15.0	.....	
						3,750	649.5	4.2	.....	46	3.80	nw.	14.3	.....	
						3,500	669.7	6.1	.....	45	4.24	wnw.	13.4	.....	
8:50	964.7	24.4	67	n.	4.0	3,336	682.4	7.4	0.61	45	4.64	wnw.	12.7	.....	
						3,250	690.0	7.9	.....	45	4.79	wnw.	13.4	2,300	
						3,000	711.0	9.4	.....	46	5.42	wnw.	15.6	.....	
						2,730	732.7	11.0	.....	46	6.04	nw.	17.0	.....	
9:12	964.8	24.2	71	n.	3.1	2,513	753.6	12.4	0.61	47	6.77	nw.	19.7	1,500	
						2,500	755.0	12.5	.....	47	6.81	nw.	19.6	.....	
						2,250	777.8	14.0	.....	48	7.47	nw.	18.6	.....	Few A.Cu., wnw.; Few Cu., nnw.
						2,000	800.8	15.5	.....	49	8.63	nnw.	17.6	.....	
						1,750	824.2	17.0	.....	50	9.69	nnw.	16.5	780	
						1,500	848.8	19.5	.....	51	11.56	n.	15.5	.....	
9:41	964.8	24.6	69	n.	2.7	1,336	863.4	19.4	−0.58	51	11.49	n.	14.9	.....	
						1,250	874.0	18.8	.....	64	13.89	n.	13.0	520	
9:51	964.8	24.6	70	n.	2.7	1,027	897.0	17.5	1.06	90	18.00	n.	9.0	.....	
						1,000	900.0	17.8	.....	89	18.14	n.	9.1	.....	
						750	926.4	20.4	.....	81	19.42	n.	10.2	.....	
9:57	964.8	24.5	70	n.	3.6	677	934.3	21.2	1.39	78	19.64	n.	10.5	.....	
						500	953.2	23.7	.....	73	21.40	n.	6.4	.....	
10:03	964.8	25.1	70	n.	4.0	396	964.8	25.1	.....	70	22.31	n.	4.0	.....	Few A.Cu., wnw.; Few Cu., nnw.

June 27, 1918 (No. 1).

A. M.															
6:34	959.6	22.0	61	e.	7.0	396	959.6	22.0	.....	61	16.13	e.	7.0	.....	3/10 A.Cu., wnw.; 4/10 St.Cu., wnw.
						500	948.2	20.8	.....	59	14.50	e.	12.2	.....	
6:37	959.6	21.9	62	e.	7.0	602	937.1	19.6	1.17	58	13.23	e.	17.3	.....	
						750	921.5	21.7	.....	58	15.06	e.	14.6	.....	
6:42	959.7	21.8	62	e.	7.4	700	920.2	21.8	−1.39	58	15.15	e.	14.4	.....	
						1,000	894.9	20.3	.....	57	13.58	se.	11.3	.....	
7:02	959.8	21.8	64	e.	7.4	1,137	880.9	19.5	0.61	56	12.70	sse.	9.5	.....	
						1,250	869.0	18.5	.....	56	11.93	sse.	13.5	0	
7:07	959.8	21.3	66	e.	7.0	1,444	850.0	16.9	0.85	56	10.78	s.	20.5	.....	
						1,500	844.1	16.8	.....	56	10.71	s.	20.6	1,800	
						1,750	820.0	16.4	.....	54	10.07	ssw.	21.1	.....	
						2,000	796.2	16.0	.....	51	9.27	sw.	21.6	.....	
						2,250	773.0	15.7	.....	49	8.74	wsw.	22.1	.....	
7:18	959.9	20.4	68	e.	7.8	2,285	770.0	15.6	0.16	49	8.68	wsw.	22.2	2,900	
						2,500	750.6	14.1	.....	56	9.01	wsw.	26.5	.....	
7:38	960.0	20.7	66	e.	7.4	2,570	744.3	13.6	0.38	58	9.04	wsw.	27.9	3,200	4/10 St.Cu., wnw.
						2,500	750.6	13.6	.....	59	9.19	wsw.	27.7	.....	
						2,250	773.0	13.8	.....	64	10.10	sw.	26.9	.....	
						2,000	796.2	13.9	.....	69	10.96	sw.	26.1	.....	Few Ci.St., wsw.; 1/10 St.Cu., wsw.
8:00	960.1	20.8	66	e.	7.8	1,971	798.7	13.9	0.79	70	11.12	sw.	26.0	.....	
						1,750	820.0	15.6	.....	69	12.23	sw.	17.5	1,000	
8:14	959.9	21.1	67	e.	10.2	1,513	842.6	17.5	0.38	67	13.40	ssw.	8.3	.....	
						1,500	844.1	17.5	.....	67	13.40	ssw.	8.6	.....	
						1,250	869.0	18.5	.....	64	13.63	s.	13.8	.....	
8:26	959.7	21.3	66	ese.	10.2	1,095	884.6	19.1	−1.28	63	13.93	se.	17.1	520	
						1,000	894.6	17.9	.....	71	14.56	se.	18.2	.....	
8:37	959.5	21.0	66	e.	11.1	814	913.8	15.5	1.32	86	15.14	ese.	20.5	.....	
						750	920.5	16.3	.....	83	15.38	ese.	19.1	0	
						500	947.8	19.6	.....	72	16.42	e.	13.4	.....	
8:46	959.3	21.0	67	e.	11.1	396	959.3	21.0	.....	67	16.66	e.	11.1	.....	Few A.Cu., wsw.

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, June, 1918*—Continued.

June 27, 1918 (No. 2).

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*volts.*	
9:39	959.1	22.4	65	ese.	9.4	396	959.1	22.4	.....	65	17.61	ese.	9.4	.....	Few A.Cu., wsw.
						500	947.8	21.1	.....	68	17.02	ese.	10.3	.....	
						750	920.5	17.9	.....	76	15.59	e.	12.4	260	
9:44	959.1	22.6	62	se.	8.6	839	911.0	16.8	1.26	79	15.11	e.	13.1	.....	
10:25	959.1	24.5	61	se.	8.2	999	894.4	19.3	−1.56	63	14.11	se.	8.7	640	Cloudless.
						1,250	868.7	18.4	.....	62	13.12	sse.	5.5	.....	
10:32	959.1	24.2	62	se.	8.2	1,291	864.5	18.2	0.78	62	12.96	sse.	5.0	.....	
						1,250	868.7	17.7	.....	67	13.57	sse.	5.8	.....	
10:50	959.1	25.0	59	ese.	6.2	1,156	878.2	16.6	0.05	78	14.73	se.	7.5	1,200	
11:31	959.3	26.0	60	e.	6.6	1,051	889.4	17.1	0.53	81	15.80	e.	9.0	460	
						1,000	894.4	17.4	.....	79	15.70	e.	8.9	0	
						750	920.5	18.7	.....	70	15.10	e.	8.3	.....	
11:39	959.3	25.3	58	e.	4.9	639	933.0	21.3	1.60	66	16.72	e.	8.0	.....	
						500	947.8	23.5	.....	62	17.96	ese.	6.2	.....	
11:44	959.3	25.2	59	ese.	4.9	396	959.3	25.2	.....	59	18.92	ese.	4.9	.....	Cloudless.

June 28, 1918 (No. 1).

A. M.															
8:05	962.5	19.0	64	ne.	4.1	396	962.5	19.0	.....	64	14.06	ne.	4.1	.....	10/10 St.Cu., w.
						500	951.0	17.8	.....	65	13.25	ne.	6.6	.....	
						750	923.6	14.9	.....	67	11.35	ene.	12.6	.....	
8:10	962.5	19.3	64	ne.	4.1	787	919.4	14.5	1.15	67	11.06	ene.	13.5	0	
8:17	962.5	19.4	62	ene.	6.2	846	913.0	17.4	−4.92	49	9.74	e.	21.7	.....	
						1,000	897.0	16.1	.....	49	8.97	e.	20.3	.....	
						1,250	870.9	14.0	.....	50	7.99	ese.	18.0	260	
						1,500	845.5	11.9	.....	50	6.96	ese.	15.7	.....	
8:35	962.5	19.5	61	ene.	5.7	1,510	844.1	11.8	0.84	50	6.92	ese.	15.6	760	9/10 St.Cu., w.
						1,750	820.5	11.0	.....	53	6.96	se.	13.9	.....	
						2,000	796.5	10.3	.....	55	6.89	s.	12.1	1,170	
						2,250	773.0	9.5	.....	58	6.88	ssw.	10.2	.....	
9:05	962.5	20.0	59	ene.	4.9	2,340	764.3	9.2	0.31	59	6.87	sw.	9.6	1,300	
						2,500	750.0	8.6	.....	70	7.82	wsw.	10.5	.....	
						2,750	728.0	7.7	.....	87	9.14	wsw.	11.8	.....	8/10 St. Cu., w.
9:17	962.6	20.7	58	ene.	4.9	2,904	714.1	7.1	0.37	98	9.89	w.	12.7	.....	
						3,000	706.3	6.5	.....	96	9.29	w.	13.9	.....	
						3,250	685.0	5.1	.....	91	8.00	w.	16.9	.....	
9:24	962.6	20.8	57	ene.	5.7	3,477	665.8	3.7	0.52	87	6.93	w.	19.7	4,000	Altitude of St.Cu. base about 3,500 m.
						3,250	685.0	4.7	.....	89	7.60	w.	19.2	.....	
						3,000	706.3	5.9	.....	92	8.55	wsw.	18.7	2,400	
						2,750	728.0	7.0	.....	95	9.52	wsw.	18.2	.....	
9:53	962.8	21.1	52	nne.	4.1	2,629	738.5	7.6	0.24	96	10.02	wsw.	17.9	1,350	
						2,500	750.0	7.9	.....	86	9.16	sw.	16.0	.....	
						2,250	773.0	8.5	.....	68	7.55	s.	12.2	.....	
10:03	962.8	21.4	54	nne.	5.3	2,178	779.7	8.7	0.63	62	6.98	sse.	11.1	.....	
						2,000	796.5	9.8	.....	57	6.91	sse.	11.4	.....	
						1,750	820.9	11.4	.....	49	6.61	e.	11.9	.....	
10:15	962.8	22.0	54	ne.	4.9	1,563	839.2	12.6	0.50	43	6.27	e.	12.3	780	
						1,500	846.1	12.9	.....	45	6.70	e.	11.8	.....	
						1,250	871.7	14.1	.....	55	8.85	ene.	9.7	260	
10:30	962.8	22.6	50	ne.	4.1	997	897.6	15.4	0.83	65	11.38	ene.	7.5	.....	
10:37	962.8	22.9	48	ne.	5.3	817	916.8	16.9	1.52	58	11.16	ne.	9.8	.....	
						750	924.1	17.9	.....	56	11.49	ne.	9.0	0	
						500	951.7	21.7	.....	50	12.98	nne.	5.8	.....	
10:44	962.8	23.3	48	nne.	4.5	396	962.8	23.3	.....	48	13.73	nne.	4.5	.....	7/10 St.Cu., w.

June 28, 1918 (No. 2).

A. M.															
11:24	962.7	23.6	48	ne.	5.4	396	962.7	23.6	.....	48	13.98	ne.	5.4	.....	10/10 St. Cu., wsw.
						500	951.0	21.7	.....	51	13.24	ne.	6.6	.....	
11:30	962.6	23.7	48	ne.	4.9	720	927.1	17.6	1.85	58	11.68	ne.	9.0	.....	
						750	923.7	17.4	.....	59	11.72	ne.	9.0	.....	
						1,000	897.3	15.4	.....	70	12.25	ene.	9.2	.....	
						1,250	871.4	13.4	.....	80	12.30	ene.	9.5	0	
11:50	962.6	23.6	48	ne.	4.9	1,273	868.8	13.2	0.80	81	12.29	ene.	9.5	.....	
						1,500	845.7	12.1	.....	76	10.73	e.	10.0	.....	
P. M.															
12:02	962.5	23.6	50	ene.	5.4	1,697	825.8	11.2	0.47	72	9.58	ese.	10.4	780	
						1,750	820.5	11.1	.....	75	9.91	se.	10.4	1,040	
						2,000	796.3	10.9	.....	88	11.48	ssw.	10.6	1,240	
12:57	962.1	26.0	39	nne.	4.9	2,200	777.5	10.7	0.01	98	12.61	wsw.	10.7	.....	6/10 St.Cu., wsw.
						2,250	773.0	10.5	.....	97	12.32	wsw.	11.3	.....	
						2,500	750.5	9.6	.....	89	10.64	wsw.	14.0	.....	
						2,750	728.0	8.6	.....	82	9.16	wsw.	16.8	.....	
						3,000	706.0	7.7	.....	74	7.78	wsw.	19.7	.....	
1:05	962.1	24.2	39	ne.	4.9	3,045	702.0	7.5	0.38	73	7.57	wsw.	20.1	4,400	Altitude of St.Cu. base about 2,800 m.
1:16	962.1	24.1	42	ene.	6.3	3,218	687.3	8.1	−0.35	34	3.67	wsw.	16.9	.....	
						3,250	684.7	7.9	.....	33	3.51	wsw.	17.2	.....	
						3,500	664.0	6.1	.....	25	2.36	w.	19.4	4,800	
1:36	962.1	25.0	40	ene.	5.8	3,734	645.4	4.4	0.68	17	1.42	w.	21.5	5,700	
						3,500	664.0	5.9	.....	20	1.86	w.	19.6	.....	
1:49	962.1	24.8	39	ne.	4.9	3,374	674.0	6.7	−0.42	21	2.06	w.	18.6	4,000	
						3,250	684.2	6.2	.....	58	5.50	w.	18.2	.....	
1:55	962.1	24.6	41	ne.	4.0	3,138	694.1	5.7	0.49	92	8.43	w.	17.9	.....	Altitude of St.Cu. base about 2,150 m.
						3,000	705.4	6.4	.....	95	9.13	w.	17.1	.....	
2:11	962.1	24.6	43	ne.	4.5	2,752	727.3	7.6	0.63	99	10.34	w.	15.7	2,800	
						2,500	750.0	9.2	.....	98	11.41	wsw.	14.7	.....	
2:17	962.1	24.7	42	ene.	5.8	2,339	764.6	10.2	−0.44	98	12.20	wsw.	14.1	.....	
						2,250	772.5	9.8	.....	95	11.51	w.	12.0	.....	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, June, 1918*—Continued.

June 28, 1918 (No. 2)—Continued.

Time.	Surface.					At different heights above sea.									Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	*°C.*	*%*		*m. p. s.*	*m.*	*mb.*	*°C.*		*%*	*mb.*		*m. p. s.*	*volts.*	
2:28	962.1	24.4	41	ene.	4.9	2,022	794.3	8.8	0.74	89	10.08	wnw.	6.7	950	
						2,000	796.3	9.0		88	10.10	wnw.	6.7		
						1,750	820.5	10.8		80	10.36	nw.	6.8		
						1,500	845.7	12.6		72	10.50	n.	6.9		
2:35	962.1	24.2	42	ne.	5.4	1,248	871.3	14.5	0.97	64	10.57	ne.	7.0	0	
						1,000	897.3	16.9		57	10.97	ne.	8.3		
						750	923.7	19.3		50	11.20	ne.	9.6		
2:56	962.1	24.6	42	ne.	4.0	742	924.5	19.4	1.62	50	11.26	ne.	9.6		
						500	951.0	23.3		43	12.30	ne.	6.0		
3:03	962.1	25.0	40	ne.	4.5	396	962.1	25.0		40	12.67	ne.	4.5		8/10 St.Cu., w.
June 28, 1918 (No. 3).															
P. M.															
3:48	962.1	24.4	42	ne.	4.5	396	962.1	24.4		42	12.84	ne.	4.5		8/10 St.Cu., w.
						500	950.7	23.0		43	12.10	ne.	5.5		
						750	923.9	19.7		44	10.10	ne.	8.0		
3:52	962.1	24.2	41	ne.	4.5	768	921.8	19.5	1.32	44	9.97	ne.	8.2		
						1,000	897.1	17.2		53	10.40	ne.	7.9		
						1,250	871.1	14.6		64	10.64	ne.	7.6		
4:45	962.1	24.0	41	nne.	4.0	1,369	859.0	13.4	1.02	69	10.61	ne.	7.4		
						1,500	846.0	12.7		74	10.87	ne.	6.5	0	
						1,750	821.0	11.4		83	11.19	ne.	4.7	620	1/10 Ci., w.; 4/10 St.Cu., w.
5:17	962.2	24.0	44	nne.	4.5	1,788	817.3	11.2	0.58	84	11.17	ne.	4.4	0	
						1,750	821.0	11.4		83	11.19	ne.	4.7		
						1,500	846.0	13.0		76	11.38	ne.	6.7		
						1,250	871.1	14.6		69	11.47	ne.	8.7		
5:35	962.3	24.1	43	nne.	5.4	1,188	877.5	15.0	0.91	67	11.42	ne.	9.2		
						1,000	897.1	16.7		61	11.60	ne.	10.1		
5:48	962.4	23.4	43	nne.	6.3	804	918.0	18.5	1.18	55	11.72	ne.	11.1		
						750	923.9	19.1		54	11.94	ne.	10.6		
						500	950.7	22.1		47	7.80	nne.	8.2		
5:56	962.5	23.3	44	nne.	7.2	396	962.5	23.3		44	12.59	nne.	7.2		2/10 Cl.St., w.; Few St.Cu., w.
June 30, 1918.															
A. M.															
6:16	972.6	12.0	91	nnw.	3.1	396	972.6	12.0		91	12.77	nnw.	3.1		Few St.Cu., nnw.
						500	960.7	11.3		92	12.32	nnw.	5.3		
						750	932.5	9.7		96	11.55	nnw.	10.7	700	Altitude of St.Cu. base about 700 m.
6:32	972.8	12.3	90	nnw.	3.1	831	923.3	9.2	0.64	97	11.29	nnw.	12.5		
						1,000	904.7	9.1		77	8.90	nnw.	11.7		
6:37	972.9	12.3	90	nnw.	3.1	1,123	891.5	9.0	0.07	63	7.23	nnw.	11.1		
						1,250	878.4	8.3		63	6.90	nnw.	12.0	1,200	9/10 St.Cu., nnw.
						1,500	852.0	7.0		64	6.41	nw.	13.9		
						1,750	826.9	5.7		64	5.86	nw.	15.8	2,000	
7:04	973.3	12.8	91	nnw.	4.5	1,864	815.2	5.1	0.53	64	5.63	nw.	16.6		
						2,000	801.7	4.5		61	5.14	nw.	16.5		
						2,250	777.0	3.5		55	4.32	nw.	16.3	3,200	
						2,500	753.6	2.4		49	3.56	wnw.	16.0		
						2,750	731.0	1.4		44	2.97	wnw.	15.8		4/10 St.Cu., nnw.
						3,000	709.0	0.3		38	2.37	wnw.	15.6	3,800	
7:44	973.5	14.5	78	nnw.	4.0	3,100	700.4	−0.1	0.42	36	2.18	wnw.	15.5		
						3,250	687.5	−0.8		34	1.94	wnw.	15.9		
						3,500	666.4	−2.1		31	1.59	wnw.	16.7		
						3,750	646.0	−3.3		28	1.30	wnw.	17.4	5,400	
						4,000	626.0	−4.6		24	1.00	wnw.	18.2		
						4,250	606.4	−5.8		21	0.79	wnw.	18.9	6,800	1/10 Cu., nw.
8:21	973.6	15.6	70	nnw.	4.5	4,368	597.0	−6.4	0.49	20	0.71	wnw.	19.3		
						4,250	606.4	−5.8		20	0.75	wnw.	19.1		
						4,000	626.0	−4.7		21	0.87	wnw.	18.8		
						3,750	646.0	−3.3		21	0.96	wnw.	18.4		
						3,500	666.4	−2.3		22	1.11	wnw.	18.1		
8:49	973.6	16.3	68	nnw.	5.8	3,358	678.0	−1.6	0.52	22	1.18	wnw.	17.9	4,600	
						3,250	687.0	−1.1		23	1.28	wnw.	17.4		
						3,000	708.5	0.3		25	1.56	wnw.	16.2		
						2,750	731.0	1.6		28	1.92	nw.	15.0		
9:05	973.6	16.6	65	nnw.	4.5	2,515	753.3	2.8	0.58	30	2.24	nw.	13.9		
						2,500	754.1	2.9		30	2.26	nw.	14.1	3,100	
						2,250	778.3	4.3		38	3.16	nw.	17.2		
9:16	973.6	17.3	61	nw.	4.9	2,119	791.1	5.1	0.42	41	3.60	nw.	18.8		
						2,000	802.7	5.6		47	4.28	nw.	18.0		
						1,750	827.9	6.7		61	5.98	nw.	16.2	1,800	
						1,500	853.4	7.7		74	7.78	nw.	14.4		Altitude of Cu. base about 1,350 m.
						1,250	879.7	8.8		87	9.86	nw.	12.7		
9:34	973.6	18.1	60	nnw.	5.4	1,195	885.3	9.0	0.88	90	10.33	nw.	12.3	0	
						1,000	906.0	10.7		81	10.42	nw.	12.0		
						750	933.8	12.9		70	10.42	nw.	11.6		
9:52	973.6	18.2	59	nnw.	5.4	716	937.6	13.2	1.09	69	10.47	nw.	11.6		
						500	961.8	16.8		63	12.05	nnw.	6.8		2/10 Cu., nw.
9:58	973.6	18.6	60	n.	4.5	396	973.6	18.6		60	12.86	n.	4.5		

TABLE 7.—*Free-air data from kite flights at Ellendale Aerological Station, April, 1918.*

April 1, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:13	946.7	1.4	79	nw.	5.8	444	946.7	1.4	.....	79	5.34	nw.	5.8	4/10 A.Cu., w.
						500	940.0	1.5	.....	76	5.24	nw.	6.3	
						750	911.5	2.2	.....	61	4.37	nnw.	8.8	
7:24	946.8	2.0	79	nw.	5.4	786	907.4	2.3	−0.26	59	4.25	nnw.	9.1	
						1,000	883.5	0.6	.....	61	3.89	nnw.	9.2	
7:32	946.9	2.6	75	nw.	4.9	1,231	858.6	− 1.2	0.79	63	3.48	nnw.	9.3	
						1,250	856.4	− 1.3	.....	63	3.45	nnw.	9.4	
						1,500	829.8	− 3.0	.....	62	2.94	nnw.	10.1	2/10 A.St., w.; 3/10 A.Cu., w.
						1,750	804.2	− 4.7	.....	61	2.51	nw.	10.7	
7:50	947.1	3.1	72	nw.	4.5	1,876	791.7	− 5.5	0.67	61	2.34	nw.	11.0	
						2,000	779.2	− 4.9	.....	52	2.11	nw.	11.3	
7:54	947.1	3.2	73	nw.	4.5	2,029	776.4	− 4.8	−0.46	50	2.04	nw.	11.4	
						2,250	754.7	− 6.2	.....	50	1.81	nw.	12.3	
						2,500	731.0	− 7.8	.....	50	1.58	nw.	13.3	
						2,750	708.0	− 9.4	.....	50	1.37	wnw.	14.4	
						3,000	685.8	−11.0	.....	50	1.18	wnw.	15.4	
8:26	947.2	4.9	68	nw.	5.4	3,172	670.5	−12.1	0.59	50	1.08	wnw.	16.1	
						3,000	687.0	−11.2	.....	51	1.19	wnw.	15.4	
						2,750	710.6	− 9.8	.....	52	1.37	wnw.	14.4	
						2,500	734.0	− 8.4	.....	53	1.58	nw.	13.4	
						2,250	757.0	− 7.1	.....	54	1.81	nw.	12.4	3/10 St.Cu., w.
						2,000	780.8	− 5.7	.....	56	2.12	nw.	11.4	
10:08	948.3	8.5	51	nw.	10.3	1,904	790.2	− 5.2	0.82	56	2.21	nw.	11.0	
						1,750	805.9	− 3.9	.....	59	2.60	nw.	10.9	
						1,500	832.0	− 1.9	.....	63	3.29	nw.	10.8	
10:43	948.7	9.0	48	nw.	11.2	1,256	858.6	0.1	0.92	67	4.12	nw.	10.6	
						1,250	859.3	0.2	.....	67	4.15	nw.	10.6	
						1,000	886.5	2.4	.....	61	4.43	nw.	9.6	
10:58	948.9	9.2	44	nw.	11.6	841	904.0	3.9	1.16	58	4.69	nw.	9.0	
						750	914.5	5.0	.....	56	4.88	nw.	9.1	
						500	942.5	7.9	.....	46	4.90	nw.	9.3	
11:04	949.0	8.5	44	nw.	9.4	444	949.0	8.5	.....	44	4.88	nw.	9.4	2/10 Cl.St., w.; 3/10 Cu., nw.

April 2, 1918.

A. M.														
7:22	968.7	−8.0	77	nne.	9.8	444	968.7	− 8.0	.....	77	2.39	nne.	9.8	1/10 Cl.St., w.; 1/10 A.Cu., w.
						500	961.7	− 8.7	.....	78	2.27	nne.	10.7	
						750	931.1	−11.8	.....	82	1.81	nne.	15.0	
7:26	968.7	−8.0	77	nne.	12.1	770	928.7	−12.0	1.23	82	1.78	nne.	15.3	
						1,000	901.0	−10.5	.....	77	1.91	nne.	15.8	
7:35	968.8	−7.8	74	nne.	10.7	1,193	878.9	− 9.3	−0.64	73	2.57	nne.	16.2	
						1,250	872.6	− 9.2	.....	72	2.01	nne.	15.7	Light snow from 8:00 to 8:55 a. m.
						1,500	844.8	− 8.7	.....	67	1.95	n.	13.7	
						1,750	818.0	− 8.3	.....	61	1.84	n.	11.6	
8:05	969.0	−7.3	72	nne.	13.0	1,968	795.6	− 7.9	−0.18	57	1.78	nnw.	9.8	
						2,000	792.6	− 8.0	.....	56	1.74	nnw.	9.5	2/10 Cl.St., w.; 5/10 St.Cu., nne.
						2,250	767.5	− 9.1	.....	45	1.26	nnw.	7.0	
8:50	969.5	−6.8	71	nne.	12.5	2,356	757.0	− 9.5	0.43	40	1.08	nnw.	6.0	
						2,250	767.5	− 9.0	.....	40	1.14	nnw.	6.8	
9:34	969.8	−6.0	64	nne.	11.2	2,003	792.6	− 7.9	−0.25	40	1.25	n.	8.7	
						1,750	818.5	− 8.5	.....	46	1.36	n.	10.7	
						1,500	845.8	− 9.1	.....	52	1.46	nne.	12.7	10/10 A.St., nw.
10:23	970.3	−4.8	62	nne.	11.6	1,278	871.0	− 9.7	−2.20	58	1.55	nne.	14.5	
						1,250	874.5	−10.3	.....	59	1.49	nne.	13.8	
10:26	970.3	−4.8	61	nne.	11.6	1,169	883.6	−12.1	0.77	60	1.29	nne.	11.7	
						1,000	903.8	−10.8	.....	74	1.79	nne.	10.8	
10:38	970.5	−4.7	58	nne.	13.4	856	920.4	− 9.7	1.29	85	2.27	nne.	10.1	
						750	933.4	− 8.3	.....	78	2.36	nne.	10.5	
						500	963.9	− 5.1	.....	62	2.47	nne.	11.4	
10:46	970.7	−4.4	58	nne.	11.6	444	970.7	− 4.4	.....	58	2.45	nne.	11.6	10/10 A.St., nw.

April 3, 1918.

A. M.														
7:13	974.7	−6.5	66	nnw.	5.4	444	974.7	−6.5	.....	66	2.33	nnw.	5.4	3/10 Cl.St., nw.
						500	967.5	−6.1	.....	61	2.23	n.	5.4	
7:31	974.7	−6.4	66	n.	5.8	647	949.9	−5.0	−0.74	48	1.92	nne.	5.4	
						750	937.4	−5.6	.....	45	1.71	nne.	5.0	
8:11	974.7	−4.0	50	n.	5.8	982	910.2	−6.8	0.54	38	1.31	ne.	4.1	2/10 Cl.St., nw.; 4/10 A.St., wnw.
						1,000	908.0	−6.9	.....	38	1.30	ne.	4.1	
						1,250	879.7	−8.6	.....	39	1.15	ne.	4.5	
8:49	974.7	−3.2	45	nne.	6.3	1,345	868.9	−9.2	0.66	40	1.12	ne.	4.6	
						1,500	851.8	−8.8	.....	36	1.04	ne.	4.9	
9:25	974.5	−1.4	36	nne.	5.4	1,655	834.8	−8.5	−0.21	33	0.98	ne.	5.2	4/10 A.St., wnw.; 3/10 A.Cu., wnw.
						1,500	851.8	−8.8	.....	34	0.98	ne.	4.7	
9:38	974.4	−0.8	33	nne.	4.9	1,344	868.9	−9.1	0.82	35	0.98	ne.	4.2	
						1,250	879.7	−8.3	.....	36	1.09	ne.	4.2	
						1,000	908.0	−6.3	.....	38	1.36	ne.	4.3	
9:48	974.4	−0.7	33	nne.	4.9	842	926.6	−5.0	1.16	40	1.60	ne.	4.3	
						750	937.4	−3.9	.....	39	1.72	ne.	4.4	
						500	967.4	−1.0	.....	35	1.97	nne.	4.8	
10:01	974.3	−0.4	34	nne.	4.9	444	974.3	−0.4	.....	34	2.01	nne.	4.9	2/10 Cl.St., nw.; 4/10 A.St., wnw.; 1/10 A.Cu., wnw.

TABLE 7.—*Free-air data from kite flights at Ellendale Aerological Station, April, 1918*—Continued.

April 4, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
1:01	971.6	9.5	23	s.	5.4	444	971.6	9.5	.....	23	2.73	s.	5.4	Cloudless.
						500	965.0	8.8	.....	23	2.61	s.	5.4	
						750	936.0	5.5	.....	26	2.35	s.	5.5	
						1,000	907.4	2.2	.....	28	2.00	s.	5.6	
2:04	971.3	10.4	21	s.	4.9	1,019	905.3	1.9	1.32	28	1.96	s.	5.6	
						1,250	879.2	−1.2	.....	36	1.99	sse.	5.2	
3:01	970.9	11.0	18	sse.	6.7	1,273	876.8	−1.5	1.34	37	1.99	sse.	5.2	
						1,500	851.6	−3.1	.....	36	1.70	sse.	5.0	
3:11	970.7	10.8	17	sse.	5.8	1,688	831.9	−4.4	0.70	36	1.52	sse.	4.9	
						1,750	825.2	−4.4	.....	36	1.52	sse.	5.1	
						2,000	800.0	−4.2	.....	36	1.55	sse.	6.0	
						2,250	775.0	−4.0	.....	36	1.57	sse.	6.9	
3:24	970.5	11.0	18	sse.	5.4	2,328	767.0	−4.0	−0.20	36	1.57	sse.	7.2	
						2,250	775.0	−4.3	.....	35	1.49	sse.	7.5	
						2,000	800.0	−5.1	.....	32	1.27	sse.	8.4	
3:45	970.2	11.3	19	sse.	5.8	1,975	802.8	−5.2	0.88	32	1.26	sse.	8.5	
						1,750	825.2	−3.2	.....	32	1.50	sse.	7.6	
						1,500	851.6	−1.0	.....	32	1.80	sse.	6.7	
4:04	969.9	11.6	19	sse.	5.8	1,429	859.7	−0.4	1.16	32	1.89	sse.	6.4	
						1,250	878.8	1.7	.....	29	2.00	sse.	6.6	
						1,000	906.5	4.6	.....	26	2.20	sse.	6.9	
						750	934.7	7.5	.....	22	2.28	sse.	7.2	
						500	963.2	10.4	.....	19	2.40	sse.	7.5	
4:33	969.9	11.0	18	sse.	7.6	444	969.9	11.0	.....	18	2.36	sse.	7.6	Cloudless.

April 5, 1918.

A. M.														
7:29	965.7	3.1	56	s.	3.6	444	965.7	3.1	.....	56	4.27	s.	3.6	10/10 A.Cu., sse.
						500	959.6	3.5	.....	54	4.24	s.	4.3	
7:32	965.7	3.6	51	s.	4.0	704	936.5	5.1	−0.77	47	4.13	s.	6.9	
						750	931.4	4.8	.....	47	4.04	s.	7.0	
						1,000	903.3	3.0	.....	47	3.56	s.	7.7	
						1,250	875.0	1.3	.....	46	3.09	s.	8.5	
						1,500	847.6	−0.5	.....	46	2.70	s.	9.2	
7:59	965.5	5.6	40	s.	6.7	1,514	846.0	−0.6	0.70	46	2.67	s.	9.2	
						1,750	821.3	−2.9	.....	50	2.40	s.	11.3	
						2,000	795.4	−5.3	.....	55	2.15	sse.	13.6	
8:16	965.4	5.8	40	s.	8.5	2,119	783.5	−6.5	0.98	57	2.01	sse.	14.7	1/10 A.Cu., sse; 9/10 A.St., sse.
						2,250	770.5	−5.8	.....	66	2.48	sse.	13.8	
						2,500	746.3	−4.6	.....	82	3.40	sse.	12.1	
8:24	965.4	6.2	40	s.	8.0	2,514	745.1	−4.5	−0.51	83	3.48	sse.	12.0	
						2,750	723.1	−5.6	.....	84	3.20	sse.	12.4	
						3,000	700.0	−7.4	.....	85	2.77	sse.	12.8	
8:36	965.3	6.4	40	s.	10.3	3,089	691.9	−7.9	0.60	85	2.65	sse.	12.9	Altitude of A.Cu. base about 3,200 m.
						3,000	700.0	−7.4	.....	85	2.77	sse.	13.3	
						2,750	722.8	−5.9	.....	85	3.15	sse.	14.4	Altitude of St.Cu., base about 2,750 m.
9:12	965.1	6.8	40	s.	9.8	2,571	739.3	−4.8	−4.35	85	3.47	sse.	15.2	
						2,500	745.6	−7.8	.....	83	2.61	sse.	15.2	
9:15	965.1	6.9	40	s.	9.8	2,479	748.0	−8.8	0.84	83	2.40	sse.	15.2	
						2,250	769.7	−6.9	.....	70	2.39	sse.	14.1	
						2,000	794.5	−4.8	.....	55	2.24	s.	13.0	
						1,750	820.2	−2.7	.....	41	2.00	s.	11.8	6/10 A.St., sse.; 4/10 St.Cu., sse.
10:23	964.7	8.1	34	s.	8.0	1,696	825.9	−2.2	0.70	38	1.93	s.	11.6	
						1,500	846.8	−0.8	.....	38	2.17	s.	10.9	
						1,250	873.8	0.9	.....	37	2.41	s.	10.1	
						1,000	901.0	2.7	.....	36	2.67	s.	9.2	
10:55	964.5	8.3	34	s.	8.9	872	915.2	3.6	1.12	36	2.85	s.	8.8	
						750	929.0	5.0	.....	35	3.05	s.	8.5	
						500	958.1	5.8	.....	34	3.13	s.	7.8	
11:05	964.5	8.4	34	s.	7.6	444	964.5	8.4	.....	34	3.75	s.	7.6	1/10 A.Cu., sse.; 7/10 A.St., sse.; 2/10 St.Cu., sse.

April 6, 1918.

P. M.														
1:37	951.1	3.0	87	wnw.	6.3	444	951.1	3.0	.....	87	6.59	wnw.	6.3	10/10 St., sw.
						500	944.6	2.5	.....	87	6.36	wnw.	6.3	Light rain began 11:30 a. m. and continued at end of flight.
						750	915.8	0.2	.....	87	5.39	wnw.	6.1	Sleet from 12:50 to 12:58 p. m.
2:06	951.0	3.5	86	wnw.	5.4	955	892.5	− 1.6	0.90	87	4.65	wnw.	6.0	Altitude of St.Cu. base about 800 m.
						1,000	887.5	− 1.9	.....	87	4.54	wnw.	6.1	Snow and sleet from 2:42 to 2:45 p. m.; 9/10 St.Cu., wnw.
						1,250	860.0	− 3.6	.....	87	3.93	nw.	6.8	
						1,500	833.5	− 5.2	.....	87	3.43	nnw.	7.4	
3:22	951.6	3.7	86	nnw.	7.6	1,650	817.7	− 6.2	0.66	87	3.15	nnw.	7.8	
						1,750	807.4	− 6.9	.....	87	2.97	nnw.	8.5	
						2,000	782.5	− 8.8	.....	87	2.51	nw.	10.4	
						2,250	757.4	−10.7	.....	87	2.12	nw.	12.3	
3:40	951.8	3.8	86	n.	8.9	2,277	754.4	−10.9	0.74	87	2.08	nw.	12.5	
						2,250	757.4	−10.7	.....	87	2.12	nw.	12.5	
						2,000	782.5	− 8.9	.....	87	2.49	nw.	12.2	
						1,750	808.0	− 7.1	.....	87	2.98	nw.	11.9	
4:09	952.1	3.8	85	n.	8.0	1,509	833.1	− 5.3	0.73	87	3.40	nw.	11.6	
						1,500	834.0	− 5.2	.....	87	3.43	nw.	11.6	
						1,250	860.5	− 3.4	.....	87	4.00	nw.	10.5	
						1,000	888.2	− 1.6	.....	87	4.65	nw.	9.4	
4:35	952.4	3.8	83	nw.	8.0	808	910.3	− 0.2	1.10	87	5.23	nw.	8.6	
						750	917.0	0.4	.....	86	5.41	nw.	8.5	
						500	946.0	3.2	.....	84	6.46	nw.	8.1	
4:42	952.6	3.8	83	nw.	8.0	444	952.6	3.8	.....	83	6.66	nw.	8.0	10/10 St.Cu., nw.

TABLE 7.—*Free-air data from kite flights at Ellendale Aerological Station, April, 1918*—Continued.

April 7, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:19	967.3	−3.8	70	nw.	15.2	444	967.3	− 3.8	.....	70	3.11	nw.	15.2	Few A.St., nw.
						500	960.5	− 4.3	.....	69	2.94	nw.	16.1	
						750	930.8	− 6.5	.....	63	2.22	nnw.	20.2	
7:22	967.3	−3.7	70	nw.	16.1	771	927.9	− 6.7	0.89	62	2.15	nnw.	20.5	
7:26	967.4	−3.7	70	nw.	13.9	855	918.0	− 3.6	−3.69	45	2.03	nnw.	19.6	
						1,000	901.4	− 4.6	.....	38	1.58	nnw.	19.7	
						1,250	873.0	− 6.4	.....	26	0.93	nnw.	19.9	
7:43	967.5	−3.2	69	nw.	13.9	1,388	857.8	− 7.4	0.71	20	0.65	nnw.	20.0	
						1,500	845.5	− 8.3	.....	19	0.57	nnw.	20.2	
7:57	967.6	−3.0	59	nnw.	11.6	1,745	819.2	−10.5	0.87	17	0.42	nnw.	20.5	
						2,000	793.0	− 9.5	.....	16	0.43	nnw.	21.8	
8:04	967.6	−2.7	58	nnw.	13.4	2,171	775.4	− 8.8	−0.08	15	0.43	nnw	22.6	Cloudless.
						2,000	793.0	− 8.4	.....	13	0.39	nnw.	22.6	
9:08	968.4	−1.3	58	nnw.	15.2	1,781	816.2	− 7.9	−0.45	11	0.34	nnw.	22.5	
						1,750	819.8	− 8.0	.....	11	0.34	nnw.	22.1	
						1,500	847.0	− 9.2	.....	13	0.36	nnw.	19.0	
9:47	969.5	−1.0	54	nnw.	14.3	1,489	848.5	− 9.2	0.67	13	0.36	nnw.	18.9	
						1,250	875.0	− 7.6	.....	15	0.48	nnw.	17.7	
10:14	970.1	−0.2	51	nw.	14.8	1,090	901.8	− 6.1	0.52	17	0.62	nnw.	16.6	
						1,000	913.9	− 6.0	.....	19	0.70	nnw.	16.2	
10:23	970.3	0.0	46	nw.	12.5	826	924.6	− 5.1	1.44	36	1.43	nnw.	12.4	
						750	933.7	− 4.0	.....	38	1.66	nnw.	12.6	
						500	963.6	− 0.4	.....	45	2.66	nw.	13.3	
10:31	970.4	0.4	47	nw.	13.4	444	970.4	0.4	.....	47	2.96	nw.	13.4	Cloudless.

April 8, 1918.

P. M.														
2:37	982.9	5.4	40	se.	4.9	444	982.9	5.4	.....	49	4.40	se.	4.9	Cloudless.
						500	976.0	4.8	.....	47	4.04	se.	5.3	
3:10	982.3	6.7	33	sse.	5.8	713	950.3	2.4	1.12	39	2.83	sse.	6.8	
						750	946.0	2.2	.....	39	2.79	sse.	6.7	
						1,000	916.9	0.9	.....	37	2.41	sse.	6.2	
3:40	981.8	7.3	37	s.	7.6	1,243	889.3	− 0.4	0.53	35	2.07	sse.	5.7	
						1,250	888.6	− 0.4	.....	35	2.07	sse.	5.7	
						1,500	861.1	− 1.2	.....	29	1.60	sse.	5.2	
						1,750	834.6	− 1.9	.....	23	1.20	s.	4.8	
4:34	981.2	7.9	29	se.	8.0	1,946	813.8	− 2.5	0.32	18	0.89	s.	4.4	
						1,750	834.6	− 1.8	.....	19	1.00	s.	5.6	
						1,500	861.1	− 1.0	.....	21	1.18	sse.	7.1	
						1,250	888.4	− 0.2	.....	23	1.38	sse.	8.6	
5:18	981.0	8.0	28	sse.	7.6	1,155	898.7	0.2	1.08	24	1.49	sse.	9.2	
						1,000	916.0	1.9	.....	28	1.96	sse.	8.9	
5:35	980.9	8.0	29	sse.	8.9	859	932.3	3.4	1.11	31	2.42	sse.	8.7	
						750	944.7	4.6	.....	30	2.54	sse.	8.5	
						500	974.0	7.4	.....	29	2.99	sse.	8.1	
5:43	980.9	8.0	29	sse.	8.0	444	980.9	8.0	.....	29	3.11	sse.	8.0	3/10 Ci.St., w.

April 9, 1918.

A. M.														
7:26	978.2	1.3	55	ssw.	8.9	444	978.2	1.3	.....	55	3.69	s.	8.9	Few Ci., wnw.
						500	971.7	1.0	.....	52	3.42	s.	11.2	
7:28	978.2	1.3	55	s.	10.7	682	949.7	0.1	0.55	42	2.58	s.	18.7	
						750	942.0	2.9	.....	46	3.46	s.	17.4	
7:34	978.2	1.4	57	s.	10.7	823	933.3	6.0	−4.19	50	4.68	s.	16.0	
						1,000	913.0	5.6	.....	48	4.37	s.	14.6	
						1,250	885.8	5.1	.....	45	3.96	ssw.	12.6	
7:57	978.0	2.3	51	s.	10.7	1,351	874.7	4.9	0.21	44	3.81	ssw.	11.8	
						1,500	859.1	3.8	.....	43	3.45	ssw.	10.9	
						1,750	833.1	2.0	.....	40	2.82	ssw.	9.4	
						2,000	807.5	0.7	.....	38	2.44	s.	8.3	3/10 Ci.St., nnw.
8:30	977.8	3.9	45	s.	11.2	2,237	783.3	−1.5	0.64	36	1.94	s.	6.4	
						2,000	807.5	−0.2	.....	39	2.34	s.	9.7	
						1,750	833.1	1.2	.....	43	2.86	ssw.	13.2	
10:08	977.6	8.7	44	s.	11.6	1,691	839.1	1.5	0.91	44	3.00	ssw.	14.0	
						1,500	859.1	3.2	.....	43	3.31	ssw.	14.5	
						1,250	885.8	5.5	.....	42	3.79	ssw.	15.1	
10:44	977.2	10.3	45	s.	13.0	1,152	896.5	6.4	−1.16	42	4.04	ssw.	15.3	
						1,000	913.0	4.6	.....	50	4.24	s.	14.5	
10:48	977.1	10.6	46	s.	14.3	979	915.5	4.4	1.27	51	4.27	s.	14.4	
						750	941.0	7.3	.....	48	4.91	s.	12.8	
						500	970.0	10.5	.....	45	5.72	s.	11.1	
11:06	977.0	11.2	44	s.	10.7	444	977.0	11.2	.....	44	5.85	s.	10.7	3/10 Ci., nnw.

April 10, 1918.

A. M.														
7:14	967.3	4.4	45	s.	15.2	444	967.3	4.4	.....	45	3.77	s.	15.2	10/10 A.St., w.
						500	961.0	5.0	.....	45	3.92	s.	16.2	
						750	932.0	7.8	.....	45	4.76	s.	20.9	
7:27	967.1	4.8	44	s.	15.6	899	914.9	9.4	−0.76	45	5.31	s.	23.7	
						750	931.5	8.8	.....	44	4.99	s.	20.3	Kites beaten down by wind.
						500	959.9	7.7	.....	43	4.52	s.	14.7	
8:19	966.3	7.5	43	s.	13.4	444	966.3	7.5	.....	43	4.46	s.	13.4	10/10 A.St., w.

TABLE 7.—*Free-air data from kite flights at Ellendale Aerological Station, April, 1918*—Continued.

April 11, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:18	964.6	3.8	52	s.	7.2	444	964.6	3.8	.....	52	4.17	s.	7.2	10/10 Ci.St., w.
						500	958.0	4.3	.....	51	4.24	s.	7.3	
						750	929.2	6.7	.....	47	4.61	ssw.	7.9	Solar halo, 22° radius from 6:20 to 8:45 a. m.
						1,000	901.5	9.2	.....	43	5.01	ssw.	8.5	
7:33	964.7	4.8	48	s.	7.6	1,077	893.2	9.9	−0.96	42	5.12	sw.	8.7	
						1,250	874.8	8.3	.....	42	4.60	sw.	9.1	
						1,500	848.8	5.9	.....	43	3.99	ssw.	9.7	
						1,750	823.3	3.6	.....	44	3.48	ssw.	10.3	
7:58	964.8	6.1	42	s.	10.3	1,917	806.3	2.0	0.94	44	3.11	ssw.	10.7	
						2,000	798.2	1.9	.....	41	2.87	ssw.	10.8	
						2,250	773.8	1.5	.....	33	2.25	s.	10.9	
						2,500	750.0	1.1	.....	25	1.66	s.	11.1	
8:22	964.8	7.3	40	ssw.	8.9	2,519	748.2	1.1	0.15	24	1.59	s.	11.1	
						2,750	727.1	−0.3	.....	21	1.25	s.	10.1	
						3,000	704.7	−1.8	.....	17	0.89	s.	9.0	7/10 Ci.St., wnw.
						3,250	682.4	−3.4	.....	14	0.64	s.	8.0	
9:18	964.7	10.3	33	s.	9.8	3,289	679.0	−3.6	0.56	13	0.59	s.	7.8	
						3,250	682.4	−3.4	.....	13	0.60	s.	7.9	
						3,000	704.7	−2.1	.....	12	0.62	s.	8.9	
						2,750	727.1	−0.9	.....	11	0.62	ssw.	9.8	
10:56	964.2	14.2	30	ssw.	10.7	2,532	746.7	0.2	0.38	10	0.62	ssw.	10.6	
						2,500	750.0	0.3	.....	12	0.75	ssw.	10.7	
						2,250	773.8	1.3	.....	25	1.68	ssw.	11.6	
						2,000	798.2	2.2	.....	39	2.79	ssw.	12.6	
11:25	964.0	14.7	28	s.	10.3	1,960	801.7	2.4	0.57	41	2.98	ssw.	12.7	Solar halo, 22° radius from 11:30 a. m. to end of flight.
						1,750	823.3	3.6	.....	41	3.24	ssw.	12.2	
						1,500	848.8	5.0	.....	42	3.66	ssw.	11.6	
						1,250	874.8	6.5	.....	42	4.07	ssw.	11.1	
11:57	963.8	15.9	25	s.	10.3	1,224	877.4	6.6	0.98	42	4.10	ssw.	11.0	
						1,000	901.5	8.8	.....	40	4.53	s.	10.6	
P. M.														
12:08	963.8	16.3	25	s.	10.3	858	917.3	10.2	1.59	39	4.86	s.	10.4	
						750	929.2	11.9	.....	35	4.88	s.	10.0	
						500	957.2	15.9	.....	26	4.70	s.	9.1	
12:15	963.7	16.8	24	s	8.9	444	963.7	16.8	.....	24	4.59	s.	8.9	9/10 Ci.St., wnw.

April 12, 1918.

A. M.														
7:25	965.0	1.4	60	s.	3.1	444	965.0	1.4	.....	60	4.06	s.	3.1	3/10 Ci.St., w.
						500	958.5	2.9	.....	55	4.14	s.	5.4	
7:30	965.0	1.6	59	s.	3.1	740	930.7	9.3	−0.98	33	3.87	ssw.	15.2	
						750	929.6	9.2	.....	33	3.84	ssw.	15.1	
						1,000	901.6	7.6	.....	32	3.34	ssw.	13.5	
						1,250	874.7	5.9	.....	31	2.88	s.	12.0	
						1,500	848.6	4.3	.....	29	2.41	s.	10.4	
7:47	964.9	3.1	52	s.	3.1	1,580	840.2	3.8	0.65	29	2.33	s.	9.9	
						1,750	823.0	3.3	.....	27	2.09	s.	10.4	
						2,000	797.9	2.7	.....	24	1.78	s.	11.1	
						2,250	773.8	2.0	.....	21	1.48	s.	11.9	6/10 Ci.St., w.
8:10	964.8	6.5	38	s.	7.2	2,398	759.9	1.6	0.27	19	1.30	s.	12.3	
						2,500	749.6	1.0	.....	19	1.25	s.	12.3	
						2,750	726.6	−0.4	.....	18	1.06	s.	12.3	
						3,000	704.4	−1.8	.....	17	0.89	s.	12.4	
						3,250	683.1	−3.3	.....	17	0.79	s.	12.4	
8:42	964.7	8.5	30	s.	8.5	3,432	667.4	−4.4	0.58	16	0.68	s.	12.4	
						3,250	683.1	−3.4	.....	15	0.69	s.	12.1	
						3,000	704.4	−1.9	.....	13	0.68	s.	11.6	
						2,750	726.6	−0.5	.....	12	0.70	s.	11.1	
						2,500	749.6	0.9	.....	10	0.65	s.	10.7	
10:20	964.0	14.9	21	s.	11.2	2,419	757.0	1.4	0.26	10	0.68	s.	10.6	Partial solar halo, 22° radius from 10:45 a. m. to end of flight.
						2,250	773.0	1.8	.....	12	0.84	s.	11.0	
						2,000	796.8	2.5	.....	14	1.02	s.	11.5	
						1,750	822.0	3.1	.....	17	1.30	s.	12.1	
11:11	963.4	16.6	17	s.	15.2	1,652	832.4	3.4	0.88	18	1.40	s.	12.3	
						1,500	848.0	4.7	.....	19	1.62	s.	12.2	
						1,250	874.0	6.9	.....	20	1.99	s.	12.0	
11:38	963.1	17.4	17	s.	14.3	1,029	898.1	8.9	1.51	21	2.39	s.	11.8	
						1,000	900.8	9.3	.....	21	2.46	s.	11.8	
11:50	962.9	17.7	17	s.	14.8	850	917.6	11.6	1.58	21	2.87	s.	12.0	
						750	928.4	13.2	.....	20	3.03	s.	12.6	
						500	956.6	17.1	.....	17	3.32	s.	14.0	
P. M.														
12:01	962.8	18.0	16	s.	14.3	444	962.8	18.0	.....	16	3.30	s.	14.3	9/10 Ci.St., w.

April 13, 1918.

A. M.														
7:22	960.0	9.1	57	s.	13.4	444	960.0	9.1	.....	57	6.59	s.	13.4	5/10 Ci.St., w.; 2/10 Cu., se.
						500	954.0	8.8	.....	57	6.46	s.	14.6	
						750	925.7	7.3	.....	58	5.93	s.	19.9	
7:26	960.0	9.1	57	s.	10.7	794	920.1	7.0	0.60	58	5.81	s.	20.8	
7:32	959.9	9.2	56	s.	12.5	942	903.7	11.6	−3.11	56	7.65	s.	20.7	
						1,000	897.7	11.2	.....	57	7.58	s.	20.2	
						1,250	871.2	9.7	.....	60	7.22	s.	18.1	
						1,500	844.8	8.5	.....	62	6.88	ssw.	16.4	
						1,750	819.8	7.1	.....	65	6.56	ssw.	14.5	
8.02	959.8	10.0	53	s.	9.8	1,852	809.5	6.0	0.62	67	6.26	ssw.	13.0	
						2,000	795.1	5.0	.....	70	6.10	ssw.	13.4	2/10 Ci.St., w.
						2,250	771.5	3.3	.....	75	5.80	ssw.	14.0	

TABLE 7.—*Free-air data from kite flights at Ellendale Aerological Station, April, 1918*—Continued.

April 13, 1918—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
						2,500	748.5	1.4	.....	80	5.41	s.	14.7	
						2,750	725.7	−0.4	.....	85	5.02	s.	15.4	
9:01	959.8	12.2	46	s.	12.5	2,822	718.5	−0.9	0.76	86	4.88	s.	15.6	
						2,750	725.7	−0.3	.....	84	5.01	s.	15.4	
						2,500	748.5	1.8	.....	78	5.43	s.	14.6	
						2,250	772.2	4.0	.....	72	5.85	s.	13.9	
10:24	959.6	15.9	36	s.	13.0	2,223	774.5	4.2	0.92	71	5.85	s.	13.8	
						2,000	796.3	6.2	.....	62	5.88	s.	14.8	
						1,750	820.9	8.5	.....	52	5.77	s.	16.0	
11:20	959.2	18.2	33	s.	11.2	1,721	823.4	8.8	0.22	51	5.78	s.	16.1	
						1,500	845.6	9.3	.....	47	5.51	s.	15.3	
						1,250	871.2	9.8	.....	43	5.21	s.	14.3	
11:58	958.7	18.8	30	s.	11.2	1,231	873.2	9.9	0.90	43	5.25	s.	14.2	
						1,000	897.7	12.0	.....	40	5.61	s.	14.3	
P. M.														
12:12	958.6	19.0	30	s.	12.5	822	916.7	13.6	1.72	38	5.92	s.	14.3	
						750	924.5	14.8	.....	37	6.23	s.	14.4	
						500	952.3	19.1	.....	32	7.08	s.	14.7	
12:22	958.5	20.1	31	s.	14.8	444	958.5	20.1	.....	31	7.29	s.	14.8	4/10 Ci.St., w.; 2/10 Ci.Cu., w.

April 14, 1918.

A. M.														
7:23	958.7	8.2	58	s.	5.4	444	958.7	8.2	.....	58	6.30	s.	5.4	Cloudless.
						500	952.4	8.5	.....	59	6.55	s.	7.8	
						750	924.4	9.8	.....	66	8.00	s.	18.3	
7:32	958.7	8.5	58	s.	5.4	821	916.2	10.2	−0.53	68	8.47	s.	21.3	
						1,000	896.9	9.1	.....	68	7.86	s.	20.2	
						1,250	870.5	7.6	.....	68	7.10	s.	18.6	
						1,500	844.8	6.1	.....	67	6.31	s.	17.0	
						1,750	819.5	4.6	.....	67	5.68	s.	15.4	Cloudless.
8:04	958.7	10.8	56	s.	7.2	1,960	798.1	3.3	0.61	67	5.19	s.	14.1	
						2,000	794.3	2.9	.....	67	5.05	s.	14.3	
						2,250	770.0	0.5	.....	71	4.49	sse.	15.2	
						2,500	746.0	−1.9	.....	74	3.86	sse.	16.2	
8:15	958.6	11.0	55	s.	8.5	2,521	744.2	−2.1	0.96	74	3.80	sse.	16.3	
						2,750	722.6	−1.5	.....	49	2.64	sse.	14.8	
8:28	958.6	11.8	55	s.	8.5	2,966	703.3	−1.0	−0.34	26	1.46	sse.	13.3	
						2,750	722.6	−2.0	.....	25	1.29	sse.	16.5	
9:23	958.4	14.1	51	s.	11.2	2,626	733.9	−2.5	0.89	24	1.19	sse.	18.4	
						2,500	746.0	−1.4	.....	28	1.52	sse.	18.4	
						2,250	770.0	0.8	.....	36	2.33	sse.	18.4	
						2,000	794.3	3.1	.....	45	3.43	sse.	18.4	
						1,750	819.5	5.3	.....	53	4.72	sse.	18.4	
10:57	958.1	17.3	44	s.	13.9	1,621	832.0	6.4	0.75	57	5.48	sse.	18.4	
						1,500	844.8	7.3	.....	58	5.93	sse.	17.7	
						1,250	870.5	9.2	.....	61	7.10	sse.	16.3	
11:38	957.8	18.8	39	sse.	10.7	1,049	891.7	10.7	1.44	63	8.11	sse.	15.1	
						1,000	896.9	11.4	.....	61	8.22	sse.	14.8	
						750	923.8	15.0	.....	51	8.70	sse.	13.2	
						500	951.3	18.6	.....	40	8.57	sse.	11.6	
P. M.														
12:01	957.7	19.4	38	sse.	11.2	444	957.7	19.4	.....	38	8.56	sse.	11.2	3/10 Cu., sse.

April 15, 1918.

A. M.														
8:06	956.3	11.2	63	ese.	7.6	444	956.3	11.2	.....	78	10.37	ese.	7.6	10/10 St.se.
						500	950.0	11.2	.....	75	9.98	ese.	9.4	
						750	921.8	11.4	.....	59	7.95	se.	17.6	
8:22	956.2	11.4	60	ese.	10.7	816	914.6	11.5	−0.08	55	7.46	se.	19.8	
						1,000	894.2	9.9	.....	61	7.44	se.	17.6	
						1,250	867.8	7.7	.....	69	7.25	se.	14.5	
8:47	955.9	12.1	55	ese.	9.8	1,326	859.7	7.0	0.88	72	7.21	se.	13.6	
						1,500	841.6	5.7	.....	78	7.14	se.	14.2	
						1,750	816.0	3.9	.....	87	7.03	se.	15.1	
						2,000	791.3	2.0	.....	96	6.78	se.	16.0	Altitude of St. Cu. base about 1,600 m.
9:01	955.7	13.0	45	ese.	9.8	2,109	780.9	1.2	0.74	100	6.66	se.	16.4	
						2,250	767.4	1.3	.....	93	6.24	se.	16.8	
9:10	955.6	13.2	47	ese.	11.6	2,437	749.5	1.4	−0.30	83	5.61	se.	17.4	
						2,250	767.4	0.5	.....	98	6.20	se.	20.0	10/10 St.Cu., se.
9:22	955.6	13.9	46	ese.	12.5	2,232	768.8	0.4	0.83	100	6.29	se.	20.2	
						2,000	791.3	2.3	.....	92	6.63	se.	18.8	
						1,750	816.0	4.4	.....	84	7.03	se.	17.3	
						1,500	841.6	6.5	.....	76	7.36	se.	15.8	
9:48	955.5	14.2	46	ese.	15.6	1,460	845.6	6.8	0.75	75	7.41	se.	15.6	
						1,250	867.8	8.4	.....	66	7.27	se.	16.5	
						1,000	894.2	10.2	.....	54	6.72	se.	17.5	
10:56	955.0	15.2	45	ese.	18.8	791	916.3	11.8	0.78	45	6.23	se.	18.4	
						750	921.0	12.1	.....	45	6.35	se.	18.0	Rain began 11:05 a. m. and continued at end of flight.
						500	948.9	14.1	.....	45	7.24	ese.	15.7	
11:11	955.0	14.5	45	ese.	15.2	444	955.0	14.5	.....	45	7.43	ese.	15.2	10/10 St., se.

TABLE 7.—*Free-air data from kite flights at Ellendale Aerological Station, April, 1918*—Continued.

April 17, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\text{ m.}}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:23	944.7	2.0	83	s.	9.4	444	944.7	2.0	.....	83	5.86	s.	9.4	1/10 St.Cu., s.
						500	938.5	1.4	.....	87	5.88	s.	10.2	
7:24	944.7	2.0	83	s.	9.4	698	915.2	−0.7	1.06	100	5.76	s.	13.2	
						750	909.4	0.0	.....	96	5.87	s.	13.1	Altitude of St.Cu. base about 700 m.;
7:30	944.7	2.1	83	s.	10.3	845	898.7	1.3	−1.36	88	5.90	s.	12.9	9/10 St.Cu., s.
						1,000	881.4	0.3	.....	85	5.30	s.	14.7	
						1,250	854.2	−1.4	.....	80	4.35	s.	17.5	
						1,500	827.8	−3.0	.....	74	3.52	s.	20.3	
7:45	944.6	2.1	86	s.	10.3	1,667	810.5	−4.1	0.66	71	3.07	s.	22.2	
						1,750	802.1	−4.5	.....	67	2.81	s.	21.9	
						2,000	777.0	−5.7	.....	53	2.00	s.	21.0	
7:59	944.5	2.8	87	s.	11.2	2,215	755.8	−6.8	0.56	42	1.44	s.	20.3	
						2,000	776.9	−5.5	.....	49	1.88	s.	19.2	
9:03	943.8	3.8	83	sse.	13.4	1,826	793.6	−4.4	0.48	54	2.28	s.	18.4	Altitude of St.Cu base about 825 m.
						1,750	801.3	−4.0	.....	59	2.58	s.	17.7	
						1,500	826.6	−2.8	.....	74	3.58	s.	15.2	
						1,250	853.0	−1.6	.....	88	4.71	sse.	12.8	Rain began 9:55 a. m. and contin-
10:05	943.4	4.7	81	sse.	14.3	1,058	874.4	−0.7	0.62	100	5.76	sse.	10.9	ued at end of flight.
						1,000	880.0	−0.3	.....	100	5.96	sse.	12.0	
10:22	943.2	4.2	85	sse.	15.6	834	898.7	0.7	1.05	100	6.43	sse.	15.3	
						750	908.0	1.6	.....	96	6.59	sse.	14.9	
						500	936.6	4.2	.....	85	7.01	sse.	13.7	
10:35	943.0	4.8	83	sse.	13.4	444	943.0	4.8	.....	83	7.14	sse.	13.4	10/10 St.Cu., sse.

April 18, 1918.

A. M.														
10:00	965.8	2.2	86	ene.	5.8	444	965.9	2.2	.....	86	6.16	ene.	5.8	10/10 St. Cu., ene.
						500	959.3	1.6	.....	87	5.97	ene.	6.0	Misting at beginning of flight.
10:30	966.4	2.6	82	ene.	8.5	722	933.4	−1.0	1.15	91	5.11	ene.	6.8	Altitude of St.Cu. base about 900 m.
						750	930.4	−1.1	.....	91	5.07	ene.	7.0	
						1,000	901.9	−1.7	.....	91	4.82	ene.	9.2	Altitude of St.Cu. base about 1,000
						1,250	874.2	−2.3	.....	91	4.59	ene.	11.4	m.
10:48	966.7	2.7	82	ene.	8.9	1,437	853.6	−2.8	0.25	91	4.40	ene.	13.0	
						1,500	847.1	−2.9	.....	92	4.42	ene.	12.1	
						1,750	821.0	−3.3	.....	94	4.36	ne.	8.8	
11:19	967.0	2.7	82	ne.	7.2	1,894	805.8	−3.5	0.18	96	4.38	ne.	6.6	
						1,750	821.0	−3.5	.....	96	4.38	ne.	8.8	10/10 St., ne.
						1,500	847.1	−3.5	.....	96	4.38	ne.	12.7	
11:55	967.2	2.7	84	ne.	8.5	1,440	853.6	−3.5	0.45	96	4.38	ne.	13.6	
						1,250	874.2	−2.6	.....	96	4.72	ne.	11.7	
						1,000	902.5	−1.5	.....	96	5.17	ne.	9.2	
P. M.														
12:08	967.3	2.8	85	ne.	10.7	974	905.6	−1.4	0.54	96	5.22	ne.	8.9	
						750	931.4	−0.2	.....	96	5.77	ne.	10.5	Mist ended 12:30 p. m.
12:19	967.4	3.1	84	ne.	9.8	732	933.4	−0.1	1.15	96	5.82	ne.	10.6	
						500	960.8	2.6	.....	85	6.25	ne.	10.7	
12:28	967.4	3.2	82	ne.	10.7	444	967.4	3.2	.....	82	6.31	ne.	10.7	10/10 St.Cu., ne.

April 20, 1918.

P. M.														
1:32	969.4	12.0	31	nne.	4.9	444	969.4	12.0	.....	31	4.35	nne.	4.9	Cloudless.
						500	962.9	11.3	.....	31	4.15	nne.	5.0	
						750	934.0	8.1	.....	32	3.46	nne.	5.4	
						1,000	905.7	4.9	.....	32	2.77	nne.	5.9	
2:04	968.5	12.2	29	nne.	7.2	1,034	901.7	4.5	1.27	32	2.69	nne.	6.0	
						1,250	878.0	2.6	.....	37	2.73	nne.	5.7	
						1,500	851.2	0.5	.....	42	2.66	nne.	5.3	
2:55	967.7	13.3	32	n.	4.9	1,714	828.3	−1.4	1.04	47	2.56	nne.	5.0	Few Ci.St., nnw.
						1,500	850.8	1.0	.....	44	2.89	nne.	5.1	
						1,250	876.7	3.8	.....	41	3.29	n.	5.3	
3:56	966.3	13.4	31	n.	4.9	1,017	901.7	6.4	1.05	38	3.65	n.	5.4	
						1,000	903.4	6.6	.....	38	3.70	n.	5.4	
4:06	966.0	13.8	30	n.	6.7	751	931.1	9.2	1.63	34	3.96	n.	5.0	
						500	959.7	13.3	.....	33	5.04	n.	5.7	
4:10	965.9	14.2	30	n.	5.8	444	965.9	14.2	.....	30	4.86	n.	5.8	1/10 Ci.St., nw.

April 21, 1918.

A. M.														
7:27	954.4	6.0	76	w.	3.1	444	954.4	6.0	.....	76	7.11	w.	3.1	1/10 Ci.St., w.
						500	947.9	6.2	.....	71	6.73	w.	3.7	
7:57	954.0	8.4	66	w.	3.6	670	928.2	6.8	−0.35	54	5.34	w.	5.6	
						750	919.4	6.2	.....	55	5.21	w.	5.7	
						1,000	891.4	4.2	.....	58	4.78	w.	6.1	
8:27	953.7	9.9	58	w.	5.8	1,186	871.2	2.7	0.79	60	4.45	w.	6.4	
						1,250	864.0	3.1	.....	52	3.97	w.	6.2	
						1,500	837.6	4.4	.....	19	1.59	nw.	5.3	6/10 Ci.St., w.
9:59	953.0	11.7	44	w.	5.8	1,569	830.7	4.8	−0.55	10	0.86	nw.	5.0	
						1,750	812.5	4.2	.....	13	1.07	nw.	6.5	
						2,000	788.0	3.4	.....	16	1.25	nw.	8.6	
10:04	953.0	11.9	41	w.	4.5	2,127	775.5	3.0	0.57	18	1.36	nw.	9.6	
						2,000	788.0	4.0	.....	27	2.20	nw.	9.5	Solar halo, 22° radius, from 10:12
10:46	952.7	12.8	38	w.	4.9	1,798	807.5	5.7	−0.24	42	3.85	nw.	9.4	a. m. to end of flight.
						1,750	812.5	5.6	.....	43	3.91	nw.	9.3	
						1,500	837.6	5.0	.....	51	4.45	nw.	8.8	
						1,250	864.0	4.4	.....	58	4.85	nw.	8.4	

TABLE 7.—*Free-air data from kite flights at Ellendale Aerological Station, April, 1918*—Continued.

April 21, 1918—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
11:05	952.6	13.4	39	wnw.	4.5	1,165	872.8	4.2	1.07	61	5.03	nw.	8.2	
						1,000	890.4	6.0	.....	58	5.42	nw.	7.4	
						750	918.0	8.7	.....	54	6.08	nw.	6.2	
11:09	952.5	13.6	36	wnw.	6.7	690	924.8	9.3	1.87	53	6.21	nw.	5.9	
						500	946.0	12.9	.....	42	6.25	w.	5.8	
11:17	952.5	13.9	39	w.	5.8	444	952.5	13.9	.....	39	6.19	w.	5.8	9/10 A.St., w.
April 22, 1918.														
A. M.														
7:17	957.3	1.2	68	nw.	6.3	444	957.3	1.2	.....	68	4.53	nw.	6.3	Few A.Cu., nw.
						500	951.0	0.8	.....	67	4.33	nw.	7.0	
						750	921.0	− 0.8	.....	60	3.43	nw.	10.3	
						1,000	893.3	− 2.5	.....	54	2.68	nw.	13.5	
7:30	957.4	1.8	64	nw.	6.7	1,006	892.5	− 2.5	0.66	54	2.68	nw.	13.6	
						1,250	865.4	− 3.8	.....	59	2.62	nw.	15.4	
						1,500	838.8	− 5.1	.....	64	2.55	nw.	17.3	
						1,750	813.0	− 6.4	.....	70	2.49	nw.	19.1	
7:44	957.5	2.4	60	nw.	8.0	1,816	805.3	− 6.7	0.52	71	2.46	nw.	19.6	
						2,000	787.1	− 8.1	.....	67	2.06	nw.	19.6	
						2,250	762.1	− 9.7	.....	61	1.63	nw.	19.7	
						2,500	737.7	−11.4	.....	55	1.26	nw.	19.8	
8:05	957.8	2.9	56	nw.	8.0	2,679	720.6	−12.6	0.57	51	1.05	nw.	19.8	
						2,750	714.0	−13.2	.....	51	0.99	nw.	19.5	Few A.Cu., nw.
						3,000	691.0	−15.1	.....	53	0.86	nw.	18.6	
8:23	958.0	3.4	51	nw.	9.8	3,192	673.3	−16.6	0.81	54	0.77	nw.	17.9	
						3,000	691.0	−15.0	.....	40	0.66	nw.	17.1	
						2,750	714.0	−12.9	.....	22	0.44	nw.	16.1	
9:46	958.2	5.8	47	nw.	10.7	2,635	725.0	−11.9	0.69	14	0.31	nw.	15.6	
						2,500	737.7	−11.0	.....	14	0.33	nw.	16.3	
						2,250	762.1	− 9.2	.....	14	0.39	nw.	17.7	
						2,000	787.1	− 7.5	.....	14	0.45	nw.	19.0	
11:09	957.7	7.8	34	nw.	12.1	1,784	809.9	− 6.0	0.92	14	0.52	nw.	20.2	
						1,750	813.0	− 5.7	.....	15	0.57	nw.	19.9	
						1,500	839.2	− 3.4	.....	23	1.06	nw.	17.3	
						1,250	866.6	− 1.1	.....	32	1.78	nw.	14.8	
11:54	957.4	8.5	31	nw.	12.1	1,087	884.6	0.4	0.87	37	2.33	nw.	13.1	
						1,000	894.6	1.2	.....	36	2.40	nw.	12.8	
P. M.														
12:03	957.0	9.0	30	nw.	11.6	755	921.9	3.3	1.93	34	2.63	nw.	12.0	
						500	951.0	8.2	.....	31	3.37	nw.	13.1	
12:12	957.3	9.3	30	nw.	13.4	444	957.3	9.3	.....	30	3.52	nw.	13.4	1/10 Cu., nw.
April 23, 1918.														
A. M.														
7:36	966.0	−5.0	52	n.	6.7	444	966.0	− 5.0	.....	52	2.09	n.	6.7	Cloudless.
						500	959.5	− 5.5	.....	53	2.04	n.	7.1	
						750	929.8	− 7.8	.....	55	1.73	n.	8.9	
8:03	966.5	−4.0	54	n.	6.7	865	915.7	− 8.9	0.93	56	1.60	n.	9.7	
						1,000	900.5	− 7.8	.....	49	1.54	n.	11.6	
						1,250	872.1	− 5.9	.....	36	1.34	n.	15.2	
8:18	966.5	−3.2	54	n.	8.0	1,341	861.7	− 5.2	−0.78	31	1.22	n.	16.5	
						1,500	844.3	− 6.1	.....	31	1.13	n.	16.3	
						1,750	817.4	− 7.4	.....	31	0.84	n.	16.0	
						2,000	791.4	− 8.7	.....	32	0.93	nnw.	15.7	
						2,250	766.8	−10.1	.....	32	0.82	nnw.	15.4	
8:50	966.5	−2.6	51	n.	6.3	2,364	755.4	−10.7	0.54	32	0.78	nnw.	15.3	
						2,500	743.0	−11.5	.....	30	0.68	nnw.	14.9	1/10 Ci.St., wnw.
						2,750	720.5	−13.0	.....	26	0.51	nnw.	14.3	
9:52	966.5	0.0	40	nw.	5.4	2,979	700.3	−14.4	0.56	23	0.40	nnw.	13.7	
						2,750	720.5	−13.2	.....	25	0.49	nnw.	13.3	
						2,500	743.0	−11.9	.....	27	0.59	nnw.	12.8	
10:52	966.5	2.1	21	nw.	4.9	2,414	751.0	−11.4	0.41	28	0.64	nnw.	12.6	
						2,250	766.8	−10.7	.....	29	0.71	nnw.	11.8	
						2,000	792.0	− 9.7	.....	31	0.83	nnw.	10.5	5/10 Ci.St., wnw.
						1,750	818.4	− 8.7	.....	33	0.96	nnw.	9.2	Solar halo, 22° radius from 11:05 a. m. to end of flight.
						1,500	845.4	− 7.6	.....	35	1.12	nnw.	7.9	
11:34	966.2	3.2	26	nw.	6.3	1,297	867.9	− 6.8	1.11	36	1.24	nnw.	6.9	
						1,250	873.0	− 6.3	.....	36	1.29	nnw.	6.9	
						1,000	900.7	− 3.5	.....	35	1.60	nw.	6.6	
11:44	966.1	3.2	26	nw.	4.9	747	930.5	− 0.7	1.29	35	2.02	nw.	6.4	
						500	959.5	2.5	.....	28	2.05	nw.	6.3	
11:47	966.0	3.2	27	nw.	6.3	444	966.0	3.2	.....	27	2.08	nw.	6.3	7/10 Ci.St., wnw.
April 24, 1918.														
A. M.														
7:20	963.3	1.0	72	sw.	8.0	444	963.3	1.0	.....	72	4.73	sw.	8.0	Cloudless.
						500	956.8	1.5	.....	69	4.70	sw.	10.1	
						750	927.3	3.9	.....	58	4.69	sw.	19.3	
7:24	963.2	1.4	68	sw.	8.5	777	924.4	4.2	−0.96	57	4.70	sw.	20.3	
						1,000	898.5	2.0	.....	57	4.02	sw.	17.7	
						1,250	871.4	−0.5	.....	57	3.34	sw.	14.7	
7:49	962.9	3.6	62	sw.	8.5	1,325	863.6	− 1.2	0.99	57	3.15	sw.	13.8	
						1,500	844.8	− 2.5	.....	51	2.53	sw.	12.2	Cloudless.
						1,750	818.7	− 4.3	.....	43	1.83	sw.	10.0	
8:17	962.8	6.3	57	sw.	11.2	1,865	806.5	− 5.1	0.72	39	1.55	sw.	9.0	

TABLE 7.—*Free-air data from kite flights at Ellendale Aerological Station, April, 1918*—Continued.

April 24, 1918—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
						2,000	793.0	−5.2	.....	35	1.38	sw.	8.9	
						2,250	768.0	−5.4	.....	29	1.13	wsw.	8.8	
8:40	962.8	7.0	52	sw.	11.2	2,346	758.6	−5.5	0.35	26	1.00	wsw.	8.7	
						2,250	768.0	−4.9	.....	27	1.09	wsw.	9.0	Few Ci.St., nnw.
						2,000	793.0	−3.3	.....	28	1.30	sw.	9.8	
10:28	961.8	11.1	35	sw.	14.8	1,898	803.5	−2.7	0.55	29	1.42	sw.	10.1	
						1,750	818.7	−1.9	.....	37	1.93	sw.	12.3	
11:13	961.2	11.7	33	sw.	13.4	1,554	838.8	−0.8	1.07	47	2.68	sw.	15.2	
						1,500	844.8	−0.2	.....	47	2.82	sw.	15.2	
						1,250	871.4	2.5	.....	47	3.44	ssw.	15.5	
11:52	960.3	12.3	31	ssw.	13.0	995	898.3	5.2	1.18	47	4.16	ssw.	15.7	
P. M.														
12:02	960.1	13.2	30	ssw.	12.1	834	916.1	7.1	1.69	42	4.24	ssw.	16.0	
						750	925.9	8.5	.....	39	4.33	ssw.	15.2	
						500	953.5	12.7	.....	30	4.41	ssw.	13.0	
12:09	959.9	13.7	28	ssw.	12.5	444	959.9	13.7	.....	28	4.39	ssw.	12.5	1/10 Ci.St., nnw.

April 25, 1918.

A. M.														
7:25	953.8	4.9	72	s.	14.3	444	953.8	4.9	.....	72	6.24	s.	14.3	5/10 Ci.St., w.; 5/10 A.St., w.
						500	947.4	4.4	.....	73	6.11	s.	15.5	
						750	918.5	2.0	.....	79	5.58	ssw.	21.0	
7:27	953.8	4.8	73	s.	15.6	758	917.6	1.9	0.96	79	5.54	ssw.	21.2	
						1,000	890.8	5.8	.....	58	5.35	ssw.	16.5	
						1,250	864.3	9.9	.....	37	4.51	ssw.	11.7	
7:51	954.0	5.2	68	s.	13.9	1,339	855.0	11.3	−1.62	29	3.88	ssw.	10.0	
						1,500	838.7	9.9	.....	29	3.54	ssw.	9.7	
						1,750	813.4	7.7	.....	30	3.15	ssw.	9.2	
						2,000	789.4	5.5	.....	31	3.00	sw.	8.6	
9:03	953.3	7.7	60	s.	14.8	2,162	773.5	4.1	1.02	31	2.54	sw.	8.3	
						2,000	789.4	6.0	.....	30	2.80	sw.	7.5	
						1,750	814.0	8.9	.....	27	3.08	sw.	6.2	9/10 Ci.St., w.
9:38	953.1	9.4	56	s.	15.2	1,601	828.6	10.7	0.57	26	3.35	sw.	5.5	
						1,500	839.0	11.3	.....	27	3.62	sw.	8.5	
10:52	952.7	13.1	46	s.	13.4	1,338	855.0	12.2	−3.35	29	4.12	ssw.	13.2	
						1,250	864.3	9.2	.....	41	4.77	ssw.	13.5	
11:08	952.5	14.0	43	sse.	15.6	1,126	877.1	5.1	1.21	58	5.10	ssw.	13.9	
						1,000	890.8	6.6	.....	58	5.66	ssw.	13.4	
11:20	952.4	14.6	40	sse.	16.1	845	907.8	8.5	1.57	57	6.33	s.	12.7	
						750	918.5	10.0	.....	53	6.51	s.	13.2	
						500	946.0	13.9	.....	42	6.67	sse.	14.5	
11:31	952.3	14.8	40	sse.	14.8	444	952.3	14.8	.....	40	6.73	sse.	14.8	4/10 Ci.St., w.

April 26, 1918.

P. M.														
2:25	964.7	0.1	94	nne.	6.7	444	964.7	0.1	.....	94	5.78	nne.	6.7	10/10 St., n.
						500	957.8	−0.5	.....	95	5.57	nne.	7.1	Misting rain at beginning of flight
						750	928.2	−3.1	.....	99	4.66	nne.	8.9	ended 3:45 p. m.
2:33	964.6	0.0	94	nne.	6.7	841	917.6	−4.0	1.03	100	4.37	nne.	9.5	
						1,000	899.4	−2.0	.....	100	5.17	nne.	7.9	Altitude of St. base about 750 m.
2:37	964.6	0.0	94	nne.	7.2	1,070	891.5	−1.1	−1.27	100	5.57	nne.	7.2	
						1,250	872.0	−0.8	.....	100	5.71	nne.	7.1	
2:58	964.5	0.0	93	nne.	6.7	1,488	846.0	−0.4	−0.04	100	5.91	nne.	7.0	
						1,250	872.0	−0.2	.....	97	5.83	nne.	6.8	
3:24	964.5	0.2	92	nne.	8.0	1,154	882.0	−0.1	−3.15	96	5.82	nne.	6.7	
3:36	964.5	0.2	92	nne.	7.6	1,024	896.4	−4.2	0.78	100	4.30	nne.	13.2	Altitude of St. base about 750 m.
						1,000	899.4	−4.0	.....	100	4.37	nne.	12.9	
						750	928.2	−2.1	.....	96	4.92	nne.	10.1	
						500	957.8	−0.1	.....	93	5.64	nne.	7.3	
3:54	964.5	0.3	92	nne.	6.7	444	964.5	0.3	.....	92	5.74	nne.	6.7	10/10 St., n.

April 27, 1918.

A. M.														
7:18	963.2	0.0	94	n.	5.4	444	963.2	0.0	.....	94	5.74	n.	5.4	10/10 St., n.
						500	956.7	−0.4	.....	94	5.56	n.	5.8	Light snow during flight.
7:24	963.3	0.0	94	n.	6.7	748	927.1	−2.1	0.69	93	4.77	n.	7.7	
						1,000	898.0	−2.0	.....	93	4.81	nne.	6.6	Altitude of St. bas about 600 m.
8:08	963.5	0.0	94	nnw.	6.3	1,237	872.1	−2.0	−0.02	93	4.81	nne.	5.5	
						1,000	898.0	−2.0	.....	93	4.81	nne.	5.4	
						750	926.6	−2.1	.....	93	4.77	n.	5.2	
8:59	963.5	0.1	94	n.	5.4	680	935.4	−2.1	0.89	93	4.77	n.	5.2	Altitude of St. base about 650 m.
						500	956.7	−0.5	.....	94	5.51	n.	4.7	
9:02	963.5	0.0	94	n.	4.5	444	963.5	0.0	.....	94	5.74	n.	4.5	10/10 St., n.

TABLE 7.—*Free-air data from kite flights at Ellendale Aerological Station, April, 1918*—Continued.

April 28, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:51	945.8	0.7	98	nw.	14.8	444	945.8	0.7	.....	98	6.30	nw.	14.8	10/10 St., nw.
						500	939.2	0.4	.....	98	6.16	nw.	15.1	Moist snow continued during flight.
						750	910.4	−1.1	.....	100	5.57	nw.	16.5	
7:54	945.7	0.7	98	nw.	15.2	772	907.8	−1.2	0.58	100	5.53	nw.	16.6	Altitude of St base about 650 m.
						1,000	882.0	−1.1	.....	100	5.57	nw.	16.6	
7:57	945.6	0.7	98	nw.	13.4	1,179	862.5	−1.1	−0.02	100	5.57	nw.	16.6	
						1,250	854.8	−1.3	.....	100	5.48	nw.	16.5	
						1,500	829.5	−2.2	.....	100	5.09	nnw.	16.1	
						1,750	803.0	−3.1	.....	100	4.71	nnw.	15.7	
						2,000	777.7	−3.9	.....	100	4.41	n.	15.4	
8:13	945.4	0.8	96	nw.	14.8	2,111	766.7	−4.3	0.35	100	4.26	n.	15.2	
						2,000	777.7	−3.9	.....	100	4.41	n.	15.2	
						1,750	803.0	−3.0	.....	100	4.75	n.	15.2	
						1,500	829.5	−2.1	.....	100	5.13	n.	15.1	
						1,250	854.8	−1.2	.....	100	5.53	n.	15.1	
9:49	944.0	0.7	98	nw.	13.9	1,050	875.2	−0.5	0.00	100	5.86	n.	15.1	
						1,000	880.9	−0.5	.....	100	5.86	n.	16.1	
9:59	943.8	0.7	98	nw.	15.2	857	896.3	−0.5	0.29	100	5.86	nnw.	18.9	Altitu e of St. base about 600 m.
						750	908.4	−0.2	.....	99	5.95	nnw.	17.8	
						500	937.1	0.5	.....	98	6.20	nw.	14.8	
10:10	943.6	0.7	98	nw.	14.8	444	943.6	0.7	.....	98	6.30	nw.	15.4	10/10 St., nnw.

April 29, 1918.

P. M.														
1:40	960.3	9.2	52	nnw.	19.7	444	960.3	9.2	.....	52	6.05	nnw.	19.7	5/10 Cu., n.
						500	954.2	8.4	.....	53	5.84	nnw.	19.4	
						750	925.3	4.9	.....	58	5.02	nnw.	17.8	
1:47	960.3	9.6	53	nnw.	21.5	778	922.0	4.5	1.41	59	4.97	nnw.	17.6	
						1,000	896.9	2.1	.....	68	4.83	nnw.	16.9	
						1,250	869.8	−0.6	.....	79	4.59	nnw.	16.0	
2:06	960.5	9.8	52	nw.	17.4	1,329	861.2	−1.4	1.07	82	4.46	nnw.	15.7	
						1,500	843.5	−2.9	.....	83	3.98	nnw.	17.4	Altitude of Cu. base about 1,650.
						1,750	818.0	−5.0	.....	85	3.41	n.	19.8	
2:32	960.8	9.9	48	nw.	18.8	1,982	793.4	−7.0	1.00	87	2.94	n.	22.1	5/10 Cu., n.
						1,750	818.0	−4.4	.....	76	3.21	n.	22.1	
						1,500	844.8	−1.5	.....	64	3.45	n.	22.1	
4:08	961.9	10.0	40	nnw.	15.6	1,403	855.0	−0.4	1.03	59	3.49	n.	22.1	
						1,250	871.4	1.2	.....	53	3.53	n.	21.2	
						1,000	899.0	3.7	.....	45	3.58	n.	19.6	
4:43	962.5	10.2	40	nnw.	15.2	799	922.0	5.8	1.30	36	3.32	n.	18.4	
						750	927.5	6.4	.....	36	3.46	n.	18.1	
						500	956.2	9.7	.....	37	4.45	nnw.	16.5	
4:51	962.6	10.4	37	nnw.	16.1	444	962.6	10.4	.....	37	4.67	nnw.	16.1	Few St.Cu., n.

April 30, 1918.

P. M.														
1:18	967.6	14.3	28	s.	4.9	444	967.6	14.3	.....	28	4.56	s.	4.9	Cloudless.
						500	961.0	13.1	.....	28	4.22	s.	5.4	
						750	933.0	7.8	.....	28	2.96	ssw.	7.8	
1:36	967.6	14.3	27	s.	5.4	799	927.1	6.8	2.11	28	2.77	ssw.	8.3	
						1,000	904.6	5.0	.....	29	2.53	ssw.	8.1	
						1,250	876.9	2.8	.....	31	2.32	ssw.	7.5	
						1,500	850.7	0.5	.....	33	2.09	ssw.	7.1	
2:19	967.5	14.6	25	sse.	6.7	1,513	849.0	0.5	0.88	33	2.09	ssw.	7.1	
						1,750	825.0	−1.0	.....	35	1.97	ssw.	6.5	
						2,000	800.0	−2.6	.....	37	1.82	sw.	6.0	
3:04	967.2	14.8	24	ssw.	6.7	2,234	775.6	−4.1	0.77	39	1.69	sw.	5.4	
						2,000	800.0	−2.0	.....	39	2.02	sw.	6.2	
						1,750	825.0	0.2	.....	38	2.36	sw.	7.1	
						1,500	850.7	2.5	.....	38	2.78	sw.	8.0	
						1,250	876.9	4.8	.....	37	3.18	sw.	8.9	
4:10	966.0	15.0	25	ssw.	7.2	1,232	878.6	4.9	1.01	37	3.20	sw.	9.0	
						1,000	903.5	7.2	.....	32	3.25	ssw.	9.1	
5:11	965.9	14.7	24	ssw.	8.9	786	927.1	9.4	1.49	27	3.18	ssw.	9.2	
						750	931.0	9.9	.....	27	3.29	ssw.	9.3	
						500	959.4	13.7	.....	24	3.76	ssw.	10.1	
5:19	965.9	14.5	23	ssw.	10.3	444	965.9	14.5	.....	23	3.80	ssw.	10.3	Cloudless.

TABLE 8.—*Free-air data from kite flights at Ellendale Aerological Station, May, 1918.*

May 1, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:29	962.3	6.6	64	s.	14.3	444	962.3	6.6	.....	64	6.24	s.	14.3	8/10 A.Cu., w.
						500	956.0	8.4	.....	57	6.28	s.	13.8	
						750	928.0	16.4	.....	26	4.85	wsw.	11.4	
7:47	962.2	7.0	63	s.	12.5	787	923.6	17.6	−3.21	21	4.23	wsw.	11.0	
						1,000	900.6	15.7	.....	22	3.92	wsw.	11.6	
8:15	962.1	7.5	62	s.	8.9	1,164	883.3	13.2	1.14	24	3.64	w.	12.3	
						1,250	874.5	12.5	.....	24	3.48	w.	12.1	
						1,500	849.0	10.4	.....	26	3.28	w.	11.5	
						1,750	823.8	8.3	.....	27	2.96	w.	11.0	
						2,000	799.0	6.2	.....	28	2.65	w.	10.4	
8:37	962.1	8.9	58	s.	8.9	2,132	786.2	5.0	0.85	29	2.53	w.	10.1	
						2,250	775.2	4.0	.....	31	2.54	w.	11.2	
						2,500	752.0	1.8	.....	36	2.51	w.	13.5	
9:06	962.1	11.0	53	s.	8.9	2,595	743.3	1.0	0.86	38	2.50	w.	14.4	
						2,750	729.0	−1.0	.....	43	2.42	w.	14.2	6/10 A.St., w.
						3,000	705.4	−3.1	.....	49	2.31	w.	14.0	
9:26	962.1	12.2	53	s.	8.0	3,207	687.2	−5.2	1.04	55	2.17	w.	13.8	
						3,000	705.4	−3.0	.....	52	2.47	w.	13.1	
						2,750	729.0	−0.3	.....	48	2.86	w.	12.2	
						2,500	752.0	2.4	.....	44	3.19	w.	11.3	
						2,250	775.2	6.6	.....	40	3.90	w.	10.4	
10:38	961.9	18.0	38	s.	8.0	2,088	790.7	6.8	0.97	37	3.65	w.	9.8	3/10 A.St., w.; 3/10 St.Cu., w.
						2,000	799.0	7.7	.....	36	3.78	w.	9.7	
						1,750	823.8	10.1	.....	33	4.08	w.	9.3	
						1,500	849.2	12.5	.....	30	4.35	w.	8.9	
11:14	961.8	20.5	32	s.	8.0	1,489	850.6	12.6	0.84	30	4.38	w.	8.9	
						1,250	875.0	14.6	.....	29	4.82	wsw.	8.5	
						1,000	901.3	16.7	.....	29	5.51	wsw.	8.0	
11:38	961.8	20.4	33	ssw.	6.3	822	920.3	18.2	0.42	28	5.85	sw.	7.7	
						750	928.0	18.5	.....	29	6.18	sw.	7.9	
						500	955.3	19.6	.....	31	7.07	ssw.	8.4	
11:45	961.8	19.8	31	ssw.	8.5	444	961.8	19.8	.....	31	7.16	ssw.	8.5	3/10 A.St., w.; 4/10 St.Cu., w.

May 2, 1918.

A. M.														
7:28	970.9	5.2	80	nne.	7.2	444	970.9	5.2	.....	80	7.08	nne.	7.2	Cloudless.
						500	964.0	4.7	.....	82	7.00	nne.	9.4	
7:30	971.0	5.2	80	nne.	7.2	580	955.0	3.9	0.96	85	6.86	ne.	12.3	
						750	935.4	8.2	.....	59	6.41	ene.	11.3	
7:32	971.0	5.3	79	nne.	7.2	784	931.5	9.3	−2.65	54	6.33	ene.	11.1	
						1,000	908.0	10.7	.....	32	4.12	ne.	7.8	Few Ci., nw.
9:19	971.3	10.7	64	nne.	7.2	1,175	889.4	11.8	−0.89	15	2.08	ne.	5.2	
						1,000	908.4	9.8	.....	39	4.73	nne.	6.4	
10:00	971.3	12.6	60	ne.	7.6	807	929.9	7.6	1.43	65	6.79	nne.	7.8	
						750	936.4	8.4	.....	64	7.05	nne.	7.6	
						500	965.0	12.0	.....	60	8.42	ne.	6.5	
10:05	971.4	12.8	59	ne.	6.3	444	971.4	12.8	.....	59	8.72	ne.	6.3	Few Ci., nw.

May 3, 1918.

A. M.														
7:57	961.4	18.0	48	ne.	4.9	444	961.4	18.0	.....	48	9.91	ne.	4.9	9/10 A.Cu., w.
						500	955.2	17.7	.....	46	9.32	ne.	5.2	
						750	927.5	16.2	.....	40	7.37	nne.	6.6	
8:10	961.5	18.0	48	n.	8.5	889	912.4	15.4	0.58	36	6.30	nne.	7.3	
						1,000	900.8	17.0	.....	31	6.01	n.	6.5	
8:54	961.5	19.0	38	n.	6.7	1,193	880.4	19.7	−1.41	22	5.05	nw.	5.1	
						1,250	875.0	19.1	.....	22	4.86	nw.	5.2	
9:26	961.6	20.0	39	n.	6.7	1,472	852.3	16.9	0.70	21	4.04	wnw.	5.7	7/10 A.Cu., w.
						1,250	875.0	16.0	.....	25	4.54	nw.	5.7	
9:45	961.7	20.9	40	nne.	6.7	999	901.0	15.0	0.81	29	4.94	nw.	5.6	
10:00	961.8	21.0	39	nne.	5.4	789	923.8	16.7	1.30	41	7.79	ene.	7.4	
						750	928.7	17.2	.....	40	7.85	ene.	7.4	
						500	956.2	20.5	.....	30	8.68	ne.	7.6	
10:14	961.9	21.2	35	ne.	7.6	444	961.9	21.2	.....	35	8.81	ne.	7.6	5/10 A.Cu., w.

May 4, 1918.

P. M.														
12:22	957.8	26.9	22	ssw.	7.2	444	957.8	26.9	.....	22	7.80	ssw.	7.2	Cloudless.
						500	951.6	26.2	.....	22	7.48	ssw.	7.3	
						750	924.6	22.9	.....	24	6.70	sw.	7.7	
12:50	957.5	27.5	25	ssw.	6.3	929	905.6	20.5	1.14	26	6.27	sw.	8.0	
						1,000	898.0	20.0	.....	25	5.84	sw.	8.0	
						1,250	872.0	18.3	.....	23	4.84	sw.	8.2	
1:24	957.0	28.8	19	ssw.	6.7	1,267	870.3	18.2	0.68	23	4.81	sw.	8.2	
						1,500	846.9	16.4	.....	25	4.66	sw.	8.0	
						1,750	822.4	14.5	.....	26	4.29	sw.	7.8	
						2,000	798.5	12.6	.....	28	4.09	sw.	7.6	Cloudless.
1:50	956.6	29.4	20	ssw.	7.6	2,169	782.3	11.3	0.80	29	3.88	sw.	7.4	
						2,000	798.5	12.7	.....	31	4.55	sw.	8.1	
						1,750	822.4	14.9	.....	33	5.59	wsw.	9.0	
2:32	955.9	29.9	18	ssw.	8.0	1,686	828.3	15.4	1.11	34	5.95	wsw.	9.3	
						1,500	846.3	17.5	.....	32	6.40	wsw.	9.4	
						1,250	871.0	20.2	.....	28	6.63	sw.	9.4	
3:17	955.1	30.5	22	ssw.	6.3	1,054	891.1	22.4	1.25	26	7.04	sw.	9.5	
						1,000	896.7	23.1	.....	25	7.07	sw.	9.5	Few Cu., w.
3:42	954.6	30.8	16	ssw.	8.0	782	918.8	25.8	1.48	21	6.98	sw.	9.6	
						750	922.5	26.3	.....	21	7.19	sw.	9.4	
						500	948.5	29.9	.....	19	8.02	ssw.	7.9	
3:50	954.5	30.8	19	ssw.	7.6	444	954.5	30.8	.....	19	8.44	ssw.	7.6	Few Cu., w.

TABLE 8.—*Free-air data from kite flights at Ellendale Aerological Station, May, 1918*—Continued.

May 5, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s*	
7:31	949.6	15.0	67	s.	8.3	444	949.6	15.0	.....	67	11.42	s.	8.3	2/10 Cl.St., nw.
						500	943.3	16.6	.....	61	11.52	s.	8.7	
						750	916.3	23.9	.....	33	9.79	sw.	10.7	
7:37	949.6	15.1	67	s.	8.3	786	912.6	25.0	−0.29	29	9.19	sw.	11.0	
						1,000	890.3	23.4	.....	25	7.20	sw.	12.9	
						1,250	865.3	21.6	.....	20	5.16	ssw.	15.2	
7:48	949.6	16.2	64	s.	8.3	1,262	864.0	21.5	0.74	20	5.13	ssw.	15.3	
						1,500	840.5	19.0	.....	24	5.27	ssw.	14.2	
						1,750	816.4	16.4	.....	29	5.41	ssw.	13.0	
						2,000	793.0	13.8	.....	34	5.37	sw.	11.9	
						2,250	769.5	11.2	.....	38	5.05	sw.	10.7	
8:22	949.3	18.2	58	s.	6.9	2,292	765.3	10.8	1.03	39	5.05	sw.	10.5	
						2,500	746.1	9.8	.....	31	3.76	sw.	9.9	1/10 Cl.St., nw.
8:42	949.1	19.2	57	s.	7.4	2,734	725.4	8.7	0.56	23	2.59	sw.	9.2	
						2,500	746.1	10.2	.....	29	3.61	sw.	9.0	
						2,250	768.7	11.8	.....	35	4.84	ssw.	8.8	
9:50	948.6	23.5	47	s.	8.3	2,238	769.8	11.9	0.96	35	4.88	ssw.	8.8	
						2,000	791.9	13.2	.....	33	5.01	ssw.	9.6	
						1,750	815.3	16.6	.....	30	5.67	ssw.	10.5	
						1,500	839.6	19.0	.....	28	6.15	ssw.	11.4	
10:42	948.3	26.5	40	s.	8.7	1,334	856.1	20.6	0.45	26	6.31	ssw.	12.0	
						1,250	864.4	21.0	.....	28	6.96	ssw.	11.6	
						1,000	889.3	22.1	.....	33	8.78	ssw.	10.4	
11:00	948.2	27.9	38	s.	8.7	828	907.7	22.9	1.28	37	10.33	ssw.	9.6	
						750	915.3	23.9	.....	36	10.68	ssw.	10.0	
						500	942.0	27.1	.....	34	12.20	s.	11.2	
11:05	948.2	27.8	34	s.	11.5	444	948.2	27.8	.....	34	12.71	s.	11.5	2/10 Cl.St., nw.

May 6, 1918.

P. M.														
1:08	951.3	12.3	74	nnw.	10.2	444	951.3	12.3	.....	74	10.59	nnw.	10.2	3/10 A.Cu., w.; 7/10 St.Cu., n.
						500	944.6	11.5	.....	77	10.45	nnw.	10.2	
						750	916.8	7.8	.....	88	9.31	nnw.	10.2	
1:12	951.4	13.1	73	nnw.	11.1	798	911.7	7.1	1.47	90	9.08	nnw.	10.2	Rain began 2:10, ended 3:15 p. m.
						1,000	889.6	7.5	.....	93	9.64	nnw.	7.4	Altitude of St.Cu. base about
2:46	951.1	11.4	79	nnw.	11.1	1,248	863.2	8.0	0.41	96	10.30	nw.	4.0	900 m.
						1,000	889.6	10.5	.....	82	10.41	nnw.	8.0	9/10 St.Cu., nnw.
3:23	951.2	11.0	79	n.	10.2	810	910.1	12.5	.....	71	10.29	nnw.	11.0	
3:25	951.2	11.0	79	n.	11.7	796	911.7	7.5	1.36	92	9.54	n.	12.0	
						750	916.8	8.1	.....	90	9.72	n.	11.8	
						500	944.6	11.5	.....	79	10.72	n.	10.5	
3:34	951.3	12.3	76	n.	10.2	444	951.3	12.3	.....	76	10.88	n.	10.2	5/10 St.Cu., nnw.

May 7, 1918.

A. M.														
7:33	958.1	10.3	80	sw.	4.6	444	958.1	10.3	.....	80	10.02	sw.	4.6	2/10 A.Cu., w.
						500	951.8	10.1	.....	80	9.89	sw.	5.1	
						750	923.4	9.4	.....	79	9.31	w.	7.5	
7:46	958.1	10.3	79	sw.	6.0	873	909.9	9.1	0.28	78	9.02	wnw.	8.6	
						1,000	896.0	8.8	.....	70	7.93	wnw.	9.0	
						1,250	869.8	8.2	.....	54	5.87	nw.	9.9	Cloudless.
7:55	958.1	11.4	75	ssw.	5.5	1,472	846.6	7.7	0.23	40	4.20	nw.	10.6	
						1,500	843.8	7.4	.....	40	4.12	nw.	10.7	
						1,750	818.4	4.8	.....	45	3.87	nw.	11.5	
						2,000	793.7	2.2	.....	49	3.51	nw.	12.3	
						2,250	769.5	−0.4	.....	54	3.19	nw.	13.2	
8:15	958.0	12.2	73	ssw.	6.9	2,440	751.1	−2.4	1.04	57	2.85	nw.	13.8	
						2,500	745.5	−2.9	.....	57	2.74	nw.	13.9	
						2,750	722.0	−4.8	.....	58	2.37	nw.	14.5	
						3,000	699.0	−6.7	.....	58	2.01	nw.	15.1	
8:31	957.9	12.7	70	ssw.	5.5	3,196	681.7	−8.2	0.83	59	1.79	nw.	15.6	
						3,000	699.0	−6.4	.....	56	1.99	nw.	15.2	
						2,750	722.0	−4.2	.....	53	2.28	nw.	14.7	
						2,500	745.5	−2.0	.....	50	2.58	nw.	14.3	
10:36	957.2	18.1	30	wnw.	8.7	2,259	768.8	0.2	1.08	47	2.91	nw.	13.8	
						2,250	769.5	0.3	.....	46	2.87	nw.	13.4	
						2,000	793.7	3.0	.....	44	3.34	nw.	12.6	
						1,750	818.4	5.7	.....	42	3.85	nw.	11.5	
						1,500	843.8	8.4	.....	39	4.30	nw.	10.4	
11:33	957.1	19.2	29	nw.	8.7	1,265	868.4	10.9	0.90	37	4.82	nw.	9.3	
						1,250	869.8	11.0	.....	37	4.86	nw.	9.3	
						1,000	896.0	13.3	.....	32	4.89	nw.	9.4	
P. M.														
12:03	957.1	19.6	28	nw.	10.1	798	918.1	15.1	1.22	29	4.98	nw.	9.4	
						750	923.4	15.7	.....	29	5.17	nw.	9.1	
						500	950.5	18.7	.....	28	6.04	nw.	7.3	
12:13	957.0	19.4	28	nw.	6.9	444	957.0	19.4	.....	28	6.31	nw.	6.9	7/10 Cu., wnw.

May 8, 1918.

A. M.														
7:43	955.8	13.4	67	nne.	3.1	444	955.8	13.4	.....	67	10.30	nne.	3.1	6/10 Cl.Cu., w.
						500	949.0	13.4	.....	65	9.99	nne.	3.2	8/10 A.Cu., w.
						750	921.4	13.3	.....	57	8.70	ne.	3.7	
						1,000	894.7	13.2	.....	49	7.43	ene.	4.2	
9:47	955.5	18.9	48	nne.	3.6	1,127	881.4	13.2	0.33	45	6.83	ene.	4.5	1/10 A.Cu., w.
						1,000	894.7	13.7	.....	40	6.27	ene.	5.9	
10:10	955.4	19.3	36	nne.	3.1	823	913.8	14.3	1.56	34	5.54	ene.	7.8	
						750	921.4	15.4	.....	34	5.95	ne.	6.8	
						500	949.0	19.3	.....	36	8.06	nne.	3.5	
10:23	955.4	20.2	36	nne.	2.7	444	955.4	20.2	.....	36	8.52	nne.	2.7	Few A.Cu., w.

TABLE 8.—*Free-air data from kite flights at Ellendale Aerological Station, May, 1918*—Continued.

May 9, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
1:53	956.7	8.0	38	n.	9.8	444	956.7	8.0	.....	38	4.08	n.	9.8	10/10 A.St., n.
						500	950.9	7.1	.....	38	3.83	n.	11.5	
						750	921.5	3.0	.....	36	2.73	nne.	19.1	
1:55	956.7	8.0	38	n.	17.9	765	919.9	2.8	1.62	36	2.69	nne.	19.6	
						1,000	893.0	−0.6	.....	39	2.27	nne.	19.4	Faint solar halo from 2:00 p. m. to
						1,250	865.5	−1.7	.....	42	2.23	nne.	19.1	end of flight.
2:13	956.7	8.1	32	n.	17.9	1,429	846.4	−3.4	0.93	44	2.02	nne.	18.9	
						1,500	838.8	−3.2	.....	41	1.92	nne.	18.8	
						1,750	813.2	−2.4	.....	29	1.45	nne.	18.2	
2:33	956.7	8.3	34	n.	15.6	1,954	792.5	−1.7	−0.48	19	1.01	nne.	17.8	
						1,750	813.2	−3.0	.....	16	0.76	nne.	19.7	
3:02	956.7	8.5	37	n.	16.1	1,653	823.2	−3.6	0.90	14	0.63	nne.	20.6	
						1,500	839.7	−2.2	.....	21	1.07	nne.	20.2	
						1,250	866.7	0.0	.....	32	1.96	nne.	19.7	
3:36	956.9	9.0	34	n.	15.6	1,089	884.1	1.5	1.12	30	2.66	nne.	19.3	
						1,000	893.0	2.5	.....	38	2.78	nne.	18.9	
3:52	957.0	9.9	29	n.	18.8	769	919.9	5.1	1.51	34	2.99	nne.	18.0	
						750	921.5	5.4	.....	34	3.05	nne.	17.9	
						500	950.0	9.2	.....	29	3.38	n.	16.0	
4:07	957.2	10.0	28	n.	15.6	444	957.2	10.0	.....	28	3.44	n.	15.6	10/10 A.St., n.

May 10, 1918.

A. M.														
7:40	963.8	5.2	55	sw.	4.0	444	963.8	5.2	.....	55	4.87	sw.	4.0	10/10 St.Cu., wnw.
						500	957.0	5.2	.....	52	4.60	sw.	5.1	
						750	928.0	5.1	.....	37	3.25	w.	10.2	
7:57	963.8	6.4	48	sw.	4.9	760	927.1	5.1	−0.03	36	3.16	w.	10.4	
						1,000	899.9	3.8	.....	38	3.05	w.	12.8	
						1,250	872.5	2.5	.....	39	2.85	w.	15.2	
8:03	963.8	6.5	48	sw.	4.5	1,267	871.0	2.4	0.53	40	2.90	w.	15.4	
						1,500	845.5	0.6	.....	51	3.25	w.	14.4	10/10 St.Cu., wnw.
						1,750	819.4	− 1.4	.....	63	3.43	wnw.	13.3	
						2,000	794.1	− 3.3	.....	75	3.48	wnw.	12.3	
8:38	963.6	8.2	40	wsw.	4.0	2,232	771.5	− 5.2	0.79	86	3.39	wnw.	11.3	
						2,250	769.7	− 5.3	.....	86	3.36	wnw.	11.3	
						2,500	746.4	− 7.2	.....	86	2.86	wnw.	11.5	
						2,750	724.0	− 9.0	.....	85	2.41	wnw.	11.7	
						3,000	701.7	−10.8	.....	85	2.06	wnw.	11.8	
9:08	963.4	8.3	39	wsw.	4.5	3,244	680.2	−12.6	0.62	84	1.72	wnw.	12.0	
						3,000	701.7	−11.3	.....	81	1.87	wnw.	13.0	Altitude of St.Cu. base about 3,150
						2,750	724.0	−10.1	.....	77	1.98	wnw.	14.0	m.
						2,500	746.4	− 8.8	.....	74	2.14	wnw.	15.0	
10:30	963.0	11.2	36	w.	6.3	2,350	739.7	− 8.0	0.95	72	2.23	wnw.	15.6	Few A.St.,wnw.; 9/10 St.Cu., wnw.
						2,250	769.7	− 7.1	.....	69	2.31	wnw.	15.3	
						2,000	793.7	− 4.7	.....	61	2.51	wnw.	14.4	
						1,750	819.4	− 2.3	.....	54	2.72	nw.	13.6	
						1,500	845.5	0.1	.....	46	2.83	nw.	12.7	
						1,250	872.5	2.5	.....	38	2.78	nw.	11.8	
11:27	962.7	11.4	32	nw.	9.8	1,207	877.2	2.9	1.09	37	2.79	nw.	11.7	
						1,000	899.9	5.2	.....	33	2.92	nw.	10.2	
11:40	962.6	11.6	30	nw.	3.1	858	915.6	6.7	1.18	30	2.94	nw.	9.1	
						750	928.0	8.0	.....	29	3.11	nw.	7.5	
						500	956.0	10.9	.....	28	3.65	nw.	3.9	
11:46	962.6	11.6	28	nw.	3.1	444	962.6	11.6	.....	28	3.82	nw.	3.1	10/10 St.Cu., wnw.

May 11, 1918.

P. M.														
12:54	954.8	16.0	33	w.	10.7	444	954.8	16.0	.....	33	6.00	w.	10.7	4/10 Cu., w.
						500	948.5	15.4	.....	33	5.78	w.	10.7	
						750	920.7	12.9	.....	36	5.36	wsw.	10.7	
1:01	954.7	16.0	31	w.	9.8	806	914.6	12.3	1.02	36	5.15	wsw.	10.7	
						1,000	892.8	10.4	.....	38	4.79	wsw.	11.4	
						1,250	866.2	7.9	.....	41	4.37	w.	12.3	
						1,500	840.5	5.4	.....	43	3.86	w.	13.2	
1:15	954.5	16.2	30	w.	9.8	1,662	824.3	3.8	0.99	45	3.61	w.	13.8	
						1,750	815.5	2.9	.....	48	3.61	w.	13.9	
						2,000	790.9	0.5	.....	56	3.54	w.	14.2	9/10 St.Cu., w.
						2,250	766.3	−2.0	.....	65	3.36	w.	14.5	
1:32	954.3	16.3	30	w.	8.9	2,283	753.1	−3.3	0.89	69	3.20	w.	14.7	
						2,250	766.0	−2.2	.....	72	3.66	w.	13.9	Rain from 1:50 to 2:00 p. m.
1:52	954.1	16.1	31	w.	14.3	2,134	776.9	−1.3	1.07	75	4.11	w.	13.2	
						2,000	790.0	0.1	.....	71	4.37	w.	13.3	
						1,750	814.9	2.8	.....	62	4.63	w.	13.6	
						1,500	840.0	5.5	.....	54	4.88	w.	13.9	
2:20	953.8	15.9	31	w.	9.4	1,368	853.8	6.9	1.02	50	4.98	w.	14.0	
						1,250	865.8	9.1	.....	46	5.32	w.	14.0	
						1,000	892.4	10.7	.....	39	5.02	w.	13.9	
2:40	953.5	15.5	30	w.	10.3	870	906.4	12.0	0.82	35	4.91	w.	13.9	
						750	919.7	13.0	.....	34	5.09	w.	12.6	
						500	947.5	15.0	.....	32	5.46	w.	10.0	
2:47	953.5	15.5	31	w.	9.4	444	953.5	15.5	.....	31	5.46	w.	9.4	9/10 St.Cu., w.

TABLE 8.—*Free-air data from kite flights at Ellendale Aerological Station, May, 1918*—Continued.

May 12, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humid.ty.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:20	962.6	−3.7	62	n.	4.5	444	962.6	− 3.7	.....	62	2.78	n.	4.5	8/10 Cl.St., nw.; Few St.Cu., n.
						500	955.7	− 4.5	.....	63	2.64	n.	5.0	
7:25	962.6	−3.6	61	n.	4.5	722	929.1	− 7.7	1.44	66	2.10	n.	6.9	
						750	926.0	− 7.8	.....	66	2.08	n.	7.3	
						1,000	896.5	− 8.7	.....	70	2.04	n.	10.4	
7:32	962.7	−3.1	55	n.	5.8	1,097	885.4	− 9.0	0.35	72	2.04	n.	11.6	
						1,250	868.0	− 8.1	.....	61	1.87	nnw.	13.4	
						1,500	840.5	− 6.6	.....	44	1.54	nw.	17.4	
7:45	962.7	−2.8	54	n.	5.4	1,621	827.8	− 5.9	−0.59	36	1.34	nw.	17.6	
						1,750	814.5	− 6.5	.....	34	1.20	nw.	17.1	2/10 Cl.St., nw.; 3/10 St.Cu., n.
						2,000	789.0	− 7.5	.....	29	0.94	nw.	16.2	
						2,250	764.3	− 8.6	.....	25	0.74	nw.	15.3	
						2,500	740.0	− 9.7	.....	21	0.56	nw.	14.4	
8:22	962.8	−2.3	50	n.	5.4	2,667	723.3	−10.4	0.44	18	0.45	nw.	13.8	
						2,500	740.0	− 9.7	.....	17	0.45	nw.	13.3	
						2,250	764.3	− 8.5	.....	16	0.47	nw.	12.6	
						2,000	789.0	− 7.4	.....	14	0.46	nnw.	11.8	
9:18	962.8	−0.5	42	n.	4.5	1,814	807.9	− 6.6	−0.39	13	0.46	nnw.	11.3	
						1,750	814.5	− 6.9	.....	13	0.44	nnw.	10.8	
						1,500	841.3	− 7.8	.....	14	0.44	n.	8.7	
9:33	962.8	−0.3	42	n.	4.9	1,383	854.1	− 8.3	0.53	14	0.42	n.	7.7	
						1,250	869.0	− 7.6	.....	21	0.67	n.	7.5	
						1,000	897.0	− 6.3	.....	33	1.18	n.	7.0	
9:53	962.8	0.7	38	n.	4.5	797	920.9	− 5.2	1.70	43	1.69	n.	6.7	
						750	926.0	− 4.4	.....	42	1.77	n.	6.4	
						500	955.7	− 0.2	.....	39	2.34	n.	4.8	
9:59	962.8	0.8	38	n.	4.5	444	962.8	0.8	.....	38	2.46	n.	4.5	Few Cl.St., nw.

May 13, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humid.ty.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.														
7:28	958.4	6.6	56	sw.	8.5	444	958.4	6.6	.....	56	5.46	sw.	8.5	5/10 A.Cu., wnw.
						500	951.5	6.4	.....	56	5.38	sw.	9.5	
						750	923.3	5.6	.....	54	4.91	sw.	14.2	
7:35	958.4	7.3	55	sw.	4.9	812	916.3	5.4	0.33	54	4.84	sw.	15.3	
						1,000	895.8	4.2	.....	60	4.95	wsw.	14.2	
						1,250	868.8	2.6	.....	68	5.01	w.	12.6	
						1,500	842.3	0.9	.....	76	4.96	wnw.	11.0	
7:55	958.4	8.4	50	sw.	11.6	1,523	839.8	0.8	0.65	77	4.98	wnw.	10.9	
						1,750	816.3	− 1.1	.....	74	4.12	wnw.	11.1	
						2,000	790.7	− 3.4	.....	70	3.22	wnw.	11.3	
						2,250	766.3	− 5.5	.....	67	2.57	wnw.	11.5	
8:16	958.4	9.2	49	sw.	8.5	2,325	759.0	− 6.2	0.87	66	2.39	wnw.	11.6	
						2,500	742.2	− 7.6	.....	71	2.28	wnw.	12.0	6/10 A.Cu., wnw.
						2,750	719.1	− 9.5	.....	78	2.11	wnw.	12.7	Altitude of A.Cu. base about 3,200 m.
						3,000	696.5	−11.5	.....	86	1.95	wnw.	13.3	
9:04	958.4	11.3	44	w.	8.5	3,223	676.4	−13.2	0.77	92	1.79	wnw.	13.9	
						3,000	696.5	−10.5	.....	84	2.08	wnw.	13.3	
						2,750	719.1	− 8.6	.....	76	2.23	wnw.	12.7	
						2,500	742.4	− 6.8	.....	67	2.30	wnw.	12.1	2/10 St.Cu., wnw.
10:02	958.1	12.9	41	wnw.	7.6	2,439	748.7	− 6.3	0.92	65	2.33	wnw.	11.9	
						2,250	766.6	− 4.6	.....	61	2.53	wnw.	11.4	
						2,000	791.0	− 2.3	.....	55	2.77	wnw.	10.8	
						1,750	816.5	0.0	.....	50	3.06	nw.	10.1	
						1,500	842.7	2.3	.....	45	3.24	nw.	9.5	
10:39	958.1	14.3	28	nw.	7.2	1,426	850.7	3.0	1.28	43	3.26	nw.	9.3	
						1,250	869.2	5.3	.....	38	3.39	nw.	9.4	
						1,000	896.0	8.5	.....	31	3.44	wnw.	9.6	
11:18	958.1	15.1	28	wnw.	7.2	879	909.7	10.0	1.33	28	3.44	wnw.	9.7	
						750	923.3	11.8	.....	28	3.88	wnw.	8.8	
						500	951.5	15.1	.....	27	4.63	nw.	7.1	
11:30	958.1	15.8	27	nw.	6.7	444	958.1	15.8	.....	27	4.85	nw.	6.7	Few Cl.St., wnw.; 3/10 Cu., wnw.

May 14, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humid.ty.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.														
6:45	964.0	4.6	46	ne.	8.0	444	964.0	4.6	.....	46	3.90	ne.	8.0	2/10 St.Cu., wsw.
						500	957.7	4.9	.....	47	4.07	ne.	8.7	
						750	928.8	6.5	.....	51	4.94	e.	11.9	
6:50	964.1	4.7	45	ne.	4.0	782	925.1	6.7	−0.62	51	5.00	e.	12.3	
						1,000	900.8	8.3	.....	54	5.91	ese.	9.7	4/10 Cl.St., w.; 2/10 St.Cu., wsw.
8:22	963.8	9.2	40	e.	17.9	1,232	876.4	10.0	−0.73	58	7.12	sse.	6.9	
						1,250	874.4	9.9	.....	58	7.08	sse.	7.0	
						1,500	848.7	8.5	.....	54	5.99	sse.	7.8	
						1,750	823.4	7.0	.....	51	5.11	s.	8.7	
						2,000	798.7	5.6	.....	47	4.28	s.	9.6	
8:27	963.7	9.3	40	e.	15.2	2,026	795.8	5.4	0.58	47	4.22	s.	9.7	
						2,250	774.5	3.6	.....	60	4.75	ssw.	11.0	
						2,500	751.0	1.6	.....	74	5.08	sw.	12.5	
						2,750	728.1	−0.4	.....	88	5.20	sw.	13.9	
8:43	963.4	10.7	40	e.	16.1	2,968	708.5	−2.1	0.80	100	5.13	wsw.	15.2	
						3,000	705.5	−2.4	.....	99	4.95	wsw.	15.3	Altitude of St.Cu. base about 3,450 m.
						3,250	682.4	−4.5	.....	95	3.98	wsw.	16.1	
8:59	963.1	11.6	39	e.	17.0	3,397	660.9	−5.8	0.91	93	3.49	wsw.	16.6	
						3,250	682.4	−4.4	.....	90	3.80	wsw.	16.6	
						3,000	704.5	−2.0	.....	85	4.39	sw.	16.6	
10:09	961.8	15.4	39	e.	12.1	2,795	723.0	0.0	1.06	81	4.95	sw.	16.6	
						2,750	727.0	0.5	.....	79	5.00	sw.	16.5	
						2,500	750.3	3.2	.....	70	5.38	sw.	16.0	
						2,250	774.5	5.8	.....	61	5.62	ssw.	15.5	
11:41	960.7	19.7	36	e.	9.8	2,087	789.7	7.5	0.46	55	5.70	ssw.	15.2	
						2,000	798.7	7.9	.....	55	5.86	ssw.	14.8	
						1,750	823.0	9.0	.....	57	6.54	sse.	13.8	
						1,500	848.1	10.2	.....	58	7.22	se.	12.8	

TABLE 8.—*Free-air data from kite flights at Ellendale Aerological Station, May, 1918*—Continued.

May 14, 1918—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
12:29	959.9	22.4	33	ese.	8.0	1,434	854.4	10.5	1.33	58	7.37	se.	12.5	
						1,250	873.3	13.0		51	7.64	se.	11.6	
12:50	959.6	22.9	33	se.	8.5	1,021	897.2	16.0	1.07	43	7.82	se.	10.4	
						1,000	899.5	16.2		43	7.92	se.	10.4	
						750	926.1	18.9		38	8.30	se.	10.1	
						500	953.0	21.6		34	8.77	ese.	9.9	
1:11	959.2	22.2	33	ese.	9.8	444	959.2	22.2		33	8.83	ese.	9.8	7/10 St.Cu., w.
May 15, 1918.														
A. M.														
6:35	955.7	7.0	72	n.	7.6	444	955.7	7.0		72	7.21	n.	7.6	3/10 Ci.St., w.
						500	949.5	7.9		71	7.56	nne.	7.3	Parhelia from 7:00 to 7:20 a. m.
						750	921.5	12.0		65	9.12	ene.	6.0	
9:51	954.7	17.1	57	ne.	6.7	910	903.7	14.6	−1.63	61	10.14	ese.	5.1	
10:02	954.7	17.6	57	ne.	6.3	988	895.5	20.2	−7.21	27	6.39	ese.	4.6	
						1,000	894.1	20.1		27	6.35	ese.	4.6	
						1,250	867.8	18.7		26	5.61	ese.	5.1	
						1,500	843.0	17.2		25	4.90	se.	5.5	
11:04	954.3	21.7	47	ne.	8.5	1,747	819.9	15.8	0.58	24	4.31	se.	6.0	
						2,000	796.5	13.4		26	4.00	sse.	6.8	2/10 Ci.St., w.
						2,250	773.0	11.1		28	3.70	sse.	7.6	
						2,500	749.8	8.8		30	3.40	s.	8.4	
						2,750	727.4	6.4		32	3.08	ssw.	9.2	
11:43	954.1	23.0	44	ne.	8.0	2,903	713.4	5.0	1.05	33	2.88	ssw.	9.7	
						2,750	727.2	6.8		31	3.06	ssw.	10.0	
						2,500	749.2	9.7		29	3.49	s.	10.5	
						2,250	772.0	12.6		26	3.79	s.	11.0	
P. M.														
1:24	952.8	26.8	37	ene.	4.5	2,243	772.4	12.7	0.79	26	3.82	s.	11.0	
						2,000	794.8	14.8		28	4.71	s.	10.9	
						1,750	818.2	16.8		29	5.55	s.	10.7	
						1,500	842.8	18.6		31	6.64	sse.	10.6	
						1,250	867.8	20.6		32	7.77	sse.	10.4	
2:22	951.5	29.5	24	sse.	7.2	1,168	876.1	21.2	1.20	33	8.31	sse.	10.4	
						1,000	892.5	23.2		30	8.53	sse.	9.2	
						750	918.2	26.2		26	8.85	sse.	7.5	
						500	944.9	29.2		22	8.92	sse.	5.8	
2:49	950.9	29.9	21	sse.	5.4	444	950.9	29.9		21	8.86	sse.	5.4	3/10 Ci.St., w.
May 16, 1918.														
A. M.														
6:29	945.7	17.5	47	s.	9.8	444	945.7	17.5		47	9.40	s.	9.8	5/10 Cl.St., wsw.; 5/10 A.St., wsw.
						500	939.0	17.4		46	9.14	s.	12.3	
6:34	945.7	17.5	47	s.	10.3	721	915.4	16.9	2.17	44	8.47	s.	22.0	
						750	912.2	16.9		44	8.47	s.	21.4	Faint solar halo, 22° radius, from 6:45 a. m. to end of flight.
						1,000	885.9	17.3		40	7.90	s.	16.3	
						1,250	860.1	17.6		37	7.45	s.	11.1	
7:49	945.3	19.5	44	s.	6.7	1,479	837.4	17.9	−0.13	34	6.97	s.	6.4	
						1,500	835.0	17.8		34	6.93	s.	6.6	
						1,750	810.5	16.6		32	6.04	s.	9.0	
						2,000	786.7	15.4		30	5.25	s.	11.4	
						2,250	763.7	14.2		28	4.53	s.	13.8	
						2,500	741.4	13.0		26	3.89	s.	16.2	
						2,750	720.0	11.7		25	3.44	s.	18.6	
8:08	945.2	20.0	42	s.	8.0	2,819	714.1	11.4	0.68	24	3.24	s.	19.3	
						2,750	720.0	12.0		23	3.23	s.	19.2	10/10 A.St., wsw.
						2,500	741.4	14.2		21	3.40	s.	18.7	
						2,250	763.7	16.4		19	3.54	s.	18.3	
9:32	944.9	22.3	36	s.	16.1	2,082	779.0	17.9	−1.02	18	3.69	s.	18.0	
						2,000	786.7	17.1		22	4.29	s.	17.2	
						1,750	810.5	14.5		35	4.13	ssw.	14.6	
						1,500	834.7	12.0		48	6.73	ssw.	12.0	
10:22	945.0	23.0	34	ssw.	5.8	1,473	837.4	11.7	1.05	49	6.74	ssw.	11.7	
						1,250	859.7	14.0		47	7.51	ssw.	11.7	
						1,000	885.7	16.7		45	8.55	ssw.	11.8	
10:48	945.1	23.5	34	ssw.	9.4	845	902.2	18.3	1.37	44	9.25	ssw.	11.8	
						750	912.2	19.6		42	9.58	ssw.	10.2	
						500	939.0	23.0		36	10.12	ssw.	5.9	
10:55	945.2	23.8	35	ssw.	4.9	444	945.2	23.8		35	10.32	ssw.	4.9	10/10 A.St., wsw.
May 17, 1918.														
A. M.														
6:38	961.0	5.6	64	nnw.	3.6	444	961.0	5.6		64	5.82	nnw.	3.6	1/10 Ci.St., sw.; 2/10 Cu., wsw.
						500	954.4	5.4		63	5.65	nnw.	5.1	
						750	925.7	4.3		61	5.07	nnw.	12.0	
6:44	961.1	5.6	63	n.	6.7	809	919.0	4.0	0.44	60	4.88	nnw.	13.6	
						1,000	897.9	7.2		46	4.67	nw.	12.7	
7:00	961.5	6.1	59	nnw.	8.0	1,223	874.2	11.0	−1.69	29	3.81	wnw.	11.6	
						1,250	871.0	10.8		29	3.76	wnw.	11.6	
						1,500	845.2	9.2		29	3.38	wnw.	11.9	
						1,750	820.3	7.6		29	3.03	w.	12.1	
						2,000	796.0	5.9		29	2.69	w.	12.3	
7:37	961.9	6.8	59	nnw.	6.3	2,052	791.0	5.6	0.65	29	2.64	w.	12.4	
						2,250	772.3	4.0		40	3.25	w.	13.3	
						2,500	748.8	2.0		53	3.74	w.	14.5	
						2,750	726.0	0.0		67	4.09	wsw.	15.6	

TABLE 8.—*Free-air data from kite flights at Ellendale Aerological Station, May, 1918*—Continued.

May 17, 1918—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:50	962.0	7.0	57	nw.	6.3	3,004	703.2	−2.1	0.81	81	4.16	wsw.	16.8	
						3,250	682.2	−3.7		61	2.73	sw.	14.0	
8:17	962.2	8.3	53	nw.	7.2	3,351	673.1	−4.4	0.72	57	2.41	sw.	12.9	
						3,250	682.2	−3.6		55	2.49	sw.	12.9	
						3,000	703.7	−1.7		49	2.60	sw.	12.7	
						2,750	726.0	0.3		43	2.68	wsw.	12.6	
9:42	962.7	11.0	49	nw.	4.5	2,515	748.0	2.1	0.62	37	2.63	wsw.	12.5	
						2,500	749.1	2.2		37	2.65	wsw.	12.5	
						2,250	773.1	3.7		35	2.79	wsw.	12.5	
						2,000	797.0	5.3		34	3.03	w.	12.5	
						1,750	821.7	6.9		32	3.18	w.	12.5	
						1,500	847.1	8.4		31	3.42	wnw.	12.5	
10:30	962.6	12.8	44	nw.	4.0	1,404	857.1	9.0	−1.08	30	3.44	wnw.	12.5	
						1,250	873.7	7.3		36	3.68	nw.	9.1	
10:40	962.6	12.3	44	nw.	3.1	1,154	883.6	6.3	0.97	39	3.72	nw.	7.0	
						1,000	900.9	7.8		40	4.23	nw.	6.3	
						750	928.4	10.2		42	5.23	wnw.	5.3	
						500	956.2	12.7		44	6.46	wnw.	4.2	
10:48	962.6	13.2	44	wnw.	4.0	444	962.6	13.2		44	6.67	wnw.	4.0	1/10 Ci.St., sw.

May 18, 1918.

P. M.														
12:31	952.8	18.6	76	se.	13.9	444	952.8	18.6		76	16.29	se.	13.9	10/10 St.Cu., se.
						500	946.3	18.2		74	15.47	se.	14.0	
						750	919.0	16.4		67	12.50	se.	14.4	
						1,000	892.7	14.7		60	10.04	se.	14.8	
12:44	952.9	19.8	68	se.	15.2	1,092	883.2	14.0	0.71	57	9.11	se.	14.9	
						1,250	866.8	13.5		55	8.51	se.	14.4	
						1,500	841.0	12.6		52	7.50	sse.	13.6	
						1,750	816.1	11.8		48	6.64	sse.	12.7	9/10 A.Cu., wsw.; few St.Cu., se.
						2,000	792.4	10.9		45	5.87	s.	11.9	
1:14	952.8	20.1	65	se.	8.9	2,008	791.6	10.9	0.30	45	5.87	s.	11.9	
						2,000	792.4	10.9		46	6.00	s.	12.0	10/10 St.Cu., s.
						1,750	815.9	11.6		64	8.74	s.	15.0	
						1,500	840.0	12.2		82	11.65	sse.	18.1	
2:14	951.9	19.4	79	se.	13.4	1,281	862.7	12.8	0.22	98	14.48	sse.	20.7	
						1,250	865.5	12.9		98	14.58	sse.	20.4	10/10 St.Cu., sse.
2:38	951.7	21.4	69	se.	12.1	1,144	876.9	13.1		99	14.93	sse.	19.3	Altitude of St.Cu. base about 1,200 m. Rain began 2:40 p. m. and continued. Thunder heard 2:29 p. m. in sw. 10/10 St., sse. Kite broke away.

May 19, 1918.

A. M.														
10:50	955.3	10.0	77	nw.	17.9	444	955.3	10.0		77	9.46	nw.	17.9	8/10 St.Cu., nw.
						500	949.0	9.2		78	9.08	nw.	17.8	
						750	920.3	5.9		81	7.52	nw.	17.6	
10:55	955.3	10.0	77	nw.	15.2	794	915.6	5.3	1.34	82	7.31	nw.	17.5	
						1,000	892.7	4.8		95	8.00	nw.	15.6	
11:06	955.5	9.8	75	nw.	13.9	1,132	878.5	4.4	0.27	100	8.37	nw.	14.4	Altitude of St.Cu.base about 1,100 m.
						1,250	866.0	4.0		84	6.91	nw.	14.7	
						1,500	839.8	3.1		49	3.74	nw.	15.3	8/10 St.Cu. nw.
11:19	955.6	10.0	70	nw.	13.4	1,531	836.4	3.0	0.35	45	3.41	nw.	15.4	
						1,750	814.1	1.7		45	3.11	nw.	15.5	
						2,000	789.1	0.3		44	2.75	nw.	15.6	
11:28	955.7	10.0	70	nw.	13.4	2,082	781.2	−0.2	0.67	44	2.64	nw.	15.6	
						2,000	789.1	0.4		43	2.70	nw.	16.2	
						1,750	814.1	2.4		41	2.98	nw.	18.2	
P. M.														
12:08	956.1	10.8	64	wnw.	12.5	1,611	828.6	3.4	−1.23	40	3.12	nw.	19.3	
						1,500	839.9	2.0		66	4.66	nw.	16.3	
12:18	956.1	10.4	66	nw.	11.6	1,375	853.4	0.5	1.06	96	6.08	nw.	13.0	
						1,250	866.6	1.8		91	6.33	nw.	13.4	
						1,000	893.7	4.5		80	6.74	wnw.	14.3	
12:37	956.2	11.1	65	wnw.	12.5	877	907.4	5.8	1.27	75	6.92	wnw.	14.7	
						750	921.7	7.4		72	7.42	wnw.	13.0	
						500	950.0	10.6		66	8.43	wnw.	9.7	
12:51	956.3	11.3	65	wnw.	8.9	444	956.3	11.3		65	8.70	wnw.	8.9	6/10 St.Cu., wnw.

May 20, 1918.

A. M.														
7:13	967.7	2.4	80	e.	7.2	444	967.7	2.4		80	5.81	e.	7.2	6/10 A.Cu., w.; 7/10 St.Cu., w.
						500	960.8	(*)		78		e.	6.8	
						750	931.8			69		ese.	5.3	
8:48	968.3	4.2	71	e.	6.7	933	911.3			62		se.	4.1	10/10 St.Cu., w.
						1,000	903.2			60		se.	4.2	
						1,250	875.0			53		se.	4.6	
9:36	967.6	4.3	71	ene.	3.1	1,368	862.4			51		se.	4.8	
						1,250	874.9			52		se.	4.9	
						1,000	902.8			54		se.	5.3	
10:05	967.3	4.6	76	e.	8.0	883	916.1			55		se.	5.4	
						750	931.8			61		ese.	5.5	
						500	960.8			73		e.	5.7	
10:20	967.7	4.7	76	e.	5.8	444	967.7	4.7		76	6.49	e.	5.8	10/10 St.Cu., w.

* Temperature pen not recording.

TABLE 8.—*Free-air data from kite flights at Ellendale Aerological Station, May, 1918*—Continued.

May 21, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100}$ m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
1:54	953.7	13.3	85	sw.	3.1	444	953.7	13.3	.....	85	12.98	sw.	3.1	10/10 St.Cu., wnw.
						500	947.5	12.7	.....	86	12.63	sw.	4.6	
2:02	953.7	13.6	83	wsw.	3.6	748	919.8	9.8	1.15	93	11.27	w.	11.5	
						1,000	892.0	7.6	.....	97	10.13	wnw.	12.0	
2:15	953.8	14.2	80	w.	5.4	1,145	876.6	6.3	0.88	100	9.55	wnw.	12.3	Altitude of St.Cu. base about 1,250 m.
						1,250	865.6	5.8	.....	100	9.22	wnw.	13.0	
						1,500	839.7	4.6	.....	98	8.31	wnw.	14.5	
2:32	954.0	14.2	78	w.	5.8	1,593	830.0	4.1	0.50	98	8.03	wnw.	15.1	
						1,500	839.7	4.6	.....	98	8.31	wnw.	14.7	
						1,250	865.6	5.8	.....	98	9.04	wnw.	13.6	
						1,000	892.0	7.1	.....	98	9.89	wnw.	12.5	
						750	919.8	8.3	.....	98	10.73	wnw.	11.4	10/10 St., wnw. Rain from 3:02 to 3:10 p. m.
2:47	954.2	14.6	77	w.	10.7	737	921.4	8.4	1.50	98	10.80	wnw.	11.3	
						500	948.1	12.0	.....	82	11.50	wnw.	12.3	
3:45	954.8	12.8	78	wnw.	12.5	444	954.8	12.8	.....	78	11.53	wnw.	12.5	10/10 St., wnw.

May 22, 1918.

A. M.														
6:33	970.0	5.0	72	w.	7.2	444	970.0	5.0	.....	72	6.28	w.	7.2	Few Ci.St., w.
						500	963.4	4.8	.....	68	5.85	w.	8.0	
						750	934.1	3.9	.....	52	4.20	wnw.	11.8	
6:45	970.1	5.4	71	wnw.	7.2	960	910.4	3.2	0.35	39	3.00	nw.	15.0	
						1,000	906.0	3.4	.....	39	3.04	nw.	15.4	
6:52	970.2	5.8	69	wnw.	7.2	1,206	883.5	4.7	−0.61	37	3.16	nw.	17.4	
						1,250	879.0	4.3	.....	37	3.07	nw.	17.3	
						1,500	852.4	2.2	.....	38	2.72	nw.	16.5	
						1,750	826.3	0.1	.....	39	2.40	nw.	15.8	
7:20	970.6	6.9	68	wnw.	6.7	1,990	801.9	− 1.9	0.84	40	2.09	nw.	15.1	
						2,000	800.6	− 2.0	.....	40	2.07	nw.	15.1	
						2,250	775.8	− 3.4	.....	41	1.89	nw.	16.1	
						2,500	751.7	− 4.9	.....	42	1.70	wnw.	17.1	
						2,750	728.5	− 6.4	.....	44	1.57	wnw.	18.0	Few Ci.St., w.
						3,000	706.0	− 7.8	.....	45	1.42	w.	19.0	
						3,250	684.0	− 9.3	.....	46	1.27	w.	20.0	
8:02	971.3	9.2	58	wnw.	6.3	3,281	681.1	− 9.5	0.59	46	1.25	w.	20.1	
8:05	971.3	9.2	57	wnw.	4.9	3,396	671.1	− 8.4	−0.96	34	1.02	w.	21.9	
						3,500	662.4	− 9.0	.....	32	0.91	w.	23.0	
						3,750	641.0	−10.6	.....	26	0.64	w.	25.8	
8:35	971.5	9.6	52	nw.	6.7	3,915	627.3	−11.6	0.58	22	0.50	w.	27.6	
						3,750	641.0	−10.7	.....	22	0.54	w.	24.8	
9:25	971.8	10.9	49	nnw.	7.6	3,582	655.5	− 9.8	0.48	22	0.58	w.	21.9	
						3,500	662.4	− 9.4	.....	24	0.66	w.	20.4	
						3,250	684.0	− 8.2	.....	29	0.88	w.	19.9	
						3,000	706.0	− 7.0	.....	35	1.18	wnw.	18.4	
						2,750	729.7	− 5.8	.....	40	1.50	wnw.	16.9	
						2,500	753.0	− 4.6	.....	45	1.87	wnw.	15.3	
10:00	972.0	11.4	45	nw.	6.3	2,427	760.4	− 4.2	0.58	47	2.02	wnw.	14.9	
						2,250	777.0	− 3.2	.....	50	2.34	wnw.	13.6	
						2,000	801.8	− 1.7	.....	54	2.86	nw.	11.7	
						1,750	827.5	− 0.3	.....	59	3.52	nw.	9.8	
						1,500	853.9	1.2	.....	63	4.20	nnw.	7.9	
10:28	971.8	11.3	46	n.	4.9	1,255	880.4	2.6	1.14	67	4.94	nnw.	6.1	
						1,000	908.8	5.5	.....	56	5.06	n.	4.7	
10:38	971.7	12.6	41	n.	5.8	824	928.2	7.5	1.37	49	5.08	n.	3.8	
						750	936.7	8.5	.....	47	5.22	n.	4.5	
						500	965.0	11.9	.....	41	5.71	nnw.	6.7	
10:44	971.7	12.7	40	nnw.	7.2	444	971.7	12.7	.....	40	5.88	nnw.	7.2	Cloudless.

May 23, 1918.

A. M.														
7:30	969.8	10.0	75	sse.	4.9	444	969.8	10.0	.....	75	9.21	sse.	4.9	10/10 St.Cu., ssw.
						500	962.7	9.9	.....	74	9.03	sse.	6.7	
						750	933.6	9.4	.....	68	8.02	sse.	14.6	
						1,000	906.0	9.0	.....	62	7.12	sse.	22.6	
7:44	969.5	10.2	75	sse.	9.8	1,101	895.7	8.8	0.18	60	6.80	sse.	25.8	
						1,250	879.5	8.0	.....	70	7.51	sse.	22.6	
						1,500	853.0	6.5	.....	86	8.32	s.	17.3	
8:02	969.2	10.4	73	sse.	9.8	1,665	836.2	5.6	0.57	97	8.83	s.	13.8	
						1,750	827.3	5.3	.....	95	8.46	s.	14.4	Rain from 7:55 to 8:25 a. m.
						2,000	802.0	4.6	.....	87	7.38	s.	16.0	
						2,250	777.7	3.8	.....	80	6.42	s.	17.6	8/10 St.Cu., ssw.
8:25	969.0	11.1	69	sse.	4.9	2,235	773.7	3.7	0.50	79	6.29	s.	17.9	
						2,250	777.7	4.0	.....	76	6.18	s.	17.8	
						2,000	802.0	5.7	.....	63	5.77	s.	17.2	
8:33	968.9	11.4	67	sse.	9.8	1,935	808.5	6.2	0.53	59	5.59	s.	17.0	
						1,750	827.3	6.3	.....	76	7.26	s.	18.5	
8:53	968.7	12.5	65	sse.	9.4	1,556	847.0	6.4	1.04	94	9.03	s.	20.0	
						1,500	853.0	6.5	.....	92	8.91	s.	20.1	
						1,250	879.5	6.7	.....	81	7.95	s.	20.3	
9:08	968.5	13.9	63	s.	12.5	1,079	897.4	6.9	1.01	73	7.26	s.	20.5	
						1,000	906.0	7.7	.....	71	7.46	s.	18.7	
9:20	968.3	14.2	60	s.	13.9	841	923.5	9.3	1.28	67	7.85	s.	15.0	
						750	933.0	10.5	.....	65	8.26	s.	14.7	
						500	961.4	13.7	.....	61	9.56	s.	14.1	
9:32	968.1	14.4	60	s.	13.9	444	968.1	14.4	.....	60	9.84	s.	13.9	9/10 St.Cu., ssw.

TABLE 8.—*Free-air data from kite flights at Ellendale Aerological Station, May, 1918*—Continued.

May 24, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
12:50	955.3	17.5	87	se.	7.6	444	955.3	17.5	.....	87	17.40	se.	7.6	10/10 St.Cu., ese.
						500	949.0	16.7	.....	90	17.11	se.	7.8	
12:55	955.2	17.6	86	ese.	6.7	720	924.7	13.6	1.41	100	15.58	ese.	8.6	Altitude of St.Cu. base about 750 m.
						750	921.2	13.6	.....	100	15.58	ese.	8.6	
1:13	954.9	18.3	81	ese.	7.6	1,004	893.7	11.7	0.67	100	13.75	ese.	9.1	
1:26	954.9	18.4	81	ese.	8.5	1,187	874.6	13.3	−0.87	98	14.96	se.	8.8	
						1,250	867.8	13.1	.....	96	14.48	se.	10.0	
						1,500	842.0	12.3	.....	88	12.59	sse.	14.7	
						1,750	817.8	11.4	.....	81	10.92	sse.	19.4	
						2,000	793.9	10.6	.....	73	9.33	s.	24.1	
1:36	954.8	18.6	79	ese.	8.9	2,121	782.1	10.2	0.33	69	8.59	s.	26.4	
						2,250	770.3	10.0	.....	68	8.35	ssw.	26.8	10/10 St.Cu., ese.
2:00	954.7	19.3	76	e.	6.3	2,299	765.7	9.9	0.96	68	8.30	sw.	27.0	
						2,250	770.3	10.0	.....	70	8.60	sw.	26.2	
						2,000	793.9	10.6	.....	81	10.35	sw.	22.3	
2:20	954.6	19.6	75	ese.	4 5	1,759	817.2	11.1	2.61	92	12.15	sw.	18.5	
						1,750	818.0	11.2	.....	91	12.10	sw.	18.4	Altitude of St.Cu. base about 950 m.
2:35	954.5	20.0	74	se.	4.0	1,523	840.4	13.6	−0.29	68	10.59	ssw.	16.9	
						1,500	842.2	13.5	.....	71	10.98	ssw.	15.9	
2:39	954.4	20.2	73	se.	4.0	1,293	863.7	13.0	0.40	100	14.98	s.	6.6	
						1,250	867.8	13.2	.....	99	15.02	s.	6.6	
						1,000	893.9	14.2	.....	97	15.70	sse.	6.5	
2:42	954.4	20.2	73	se.	4.5	867	908.3	14.7	1.37	95	15.89	sse.	6.4	
						750	920.8	16.3	.....	89	16.49	sse.	5.7	
						500	947.8	19.7	.....	76	17.44	se.	4.3	
2:52	954.4	20.5	73	se.	4.0	444	954.4	20.5	.....	73	17.61	se.	4.0	7/10 St.Cu., ese.

May 25, 1918.

P. M.														
1:51	958.9	13.5	85	n.	9.4	444	958.9	13.5	.....	85	13.15	n.	9.4	10/10 St.Cu., nne.
						500	952.3	12.9	.....	87	12.95	n.	9.6	Altitude of St.Cu. base about 700 m.
						750	924.5	10.3	.....	97	12.15	nne.	10.5	
1:55	958.8	13.4	86	nne.	11.2	810	917.8	9.7	1.04	99	11.91	nne.	10.7	
						1,000	897.0	9.2	.....	99	11.52	ne.	9.2	
2:07	958.7	13.0	87	nne.	5.4	1,153	880.7	8.8	2.62	99	11.22	ne.	8.0	
						1,250	870.1	9.7	.....	89	10.71	ne.	7.6	
						1,500	844.8	12.2	.....	62	8.81	e.	6.7	
2:15	958.7	13.0	87	nne.	11.2	1,608	833.9	13.2	−1.12	51	7.74	e.	6.3	
						1,500	844.8	11.8	.....	68	9.41	e.	7.2	
2:25	958.7	13.0	87	nne.	11.2	1,333	861.8	9.7	0.0	94	11.31	e.	8.6	
						1,250	870.1	9.7	.....	95	11.43	e.	9.0	
						1,000	897.0	9.7	.....	97	11.67	ne.	10.1	
2:33	958.7	12.8	88	nne.	12.1	855	912.8	9.7	0.75	98	11.79	ne.	10.7	
						750	924.5	10.5	.....	93	12.06	ne.	11.4	
						500	952.3	12.4	.....	89	12.82	nne.	13.0	Altitude of St. base about 650 m.
2:45	958.7	12.8	88	nne.	13.4	444	958.7	12.8	.....	88	13.01	nne.	13.4	10/10 St., nne.

May 26, 1918.

A. M.														
11:32	967.1	5.0	86	n.	4.5	444	967.1	5.0	.....	86	7.50	n.	4.5	10/10 St.Cu., n.
						500	960.1	4.3	.....	88	7.31	n.	5.5	
						750	930.9	1.3	.....	98	6.58	n.	5.7	
11:37	967.1	5.3	83	n.	8.5	774	928.6	1.0	1 21	99	6.50	n.	10.1	Altitude of St.Cu. base about 800 m.
						1,000	902.5	−0.1	.....	99	6.00	n.	9.4	
P. M.														
12:04	967.2	5.2	83	n.	7.2	1,056	896.5	−0.4	0.50	99	5.85	n.	9.2	
12:14	967.1	5.2	83	n.	7.6	1,197	880.8	2.1	−1.77	99	7.04	nne.	8.3	
						1,250	875.0	2.2	.....	99	7.09	nne.	7.8	
						1,500	848.0	2.5	.....	99	7.24	nne.	5.6	
12:42	967.0	5.5	82	n.	9.4	1,634	834.4	2.6	0.09	99	7.30	nne.	4.4	
						1,500	848.0	3.0	.....	98	7.43	nne.	5.9	
12:55	966.9	5.8	81	n.	10.3	1,326	866.9	3.5	−1.25	96	7.54	nne.	7.9	
						1,250	875.0	2.5	.....	97	7.09	nne.	9.1	
1:04	966.9	6.0	80	n.	9.8	1,055	896.5	0.1	0.49	98	6.03	nne.	12.1	Altitude of St.Cu. base about 900 m.
						1,000	902.5	0.4	.....	98	6.23	nne.	12.2	
1:13	966.8	6.4	79	n.	10.3	771	928.6	1.5	1.50	98	6.67	n.	12.6	
						750	930.9	1.8	.....	97	6.75	n.	12.4	
						500	959.8	5.6	.....	82	7.46	n.	10.3	
1:19	966.7	6.4	79	n.	9.8	444	966.7	6.4	.....	79	7.59	n.	9.8	10/10 St.Cu., n.

May 27, 1918 (No. 1).

A. M.														
6:43	965.8	4.8	93	nne.	8.0	444	965.8	4.8	.....	93	8.00	nne.	8.0	6/10 Ci.St., wnw.; 2/10 St. Cu., nne.
						500	959.0	4.3	.....	94	7.81	nne.	8.5	Altitude of St.Cu. base about 800 m.
						750	930.2	2.2	.....	100	7.16	nne.	10.7	
6:53	965.6	5.0	92	nne.	9.4	763	928.5	2.1	0.85	100	7.11	nne.	10.8	
						1,000	901.9	2.5	.....	99	7.24	ne.	8.7	
7:03	965.5	5.0	92	n.	8.9	1,050	895.9	2.6	−0.17	99	7.30	ne.	8.3	10/10 St.Cu., nne.
						1,250	874.2	2.5	.....	94	6.87	ne.	7.0	
7:28	965.7	5.1	90	nne.	9.8	1,343	864.3	2.5	0.35	92	6.73	ne.	6.4	
						1,500	848.0	2.0	.....	90	6.35	ne.	5.8	
						1,750	822.0	1.3	.....	88	5.90	ne.	4.7	
8:19	966.1	6.1	89	nne.	4.0	1,761	821.0	1.3	0.17	88	5.90	ne.	4.7	
						1,750	822.0	1.3	.....	88	5.90	ne.	4.8	
						1,500	848.0	1.4	.....	93	6.29	ne.	6.1	
						1,250	874.8	1.6	.....	99	6.79	nne.	7.4	
8:42	966.3	6.3	90	nne.	7.2	1,187	881.6	1.6	0.20	100	6.86	nne.	7.7	
						1,000	902.2	2.0	.....	100	7.06	nne.	8.1	
						750	931.0	2.5	.....	100	7.31	nne.	8.7	Altitude of St.Cu. base about 850 m.
9:00	966.5	6.9	87	nne.	8.0	741	931.9	2.5	1.52	100	7.31	nne.	8.7	
						500	960.0	6.2	.....	89	8.44	nne.	8.1	
9:10	966.7	7.0	87	nne.	8.0	444	966.7	7.0	.....	87	8.72	nne.	8.0	10/10 St.Cu., nne.

TABLE 8.—*Free-air data from kite flights at Ellendale Aerological Station, May, 1918*—Continued.

May 27, 1918 (No. 2).

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
2:18	967.5	10.2	77	ne.	5.8	444	967.5	10.2	.....	77	9.59	ne.	5.8	10/10 St.Cu., ne.
						500	960.8	9.6	.....	79	9.44	ne.	6.0	
						750	932.2	6.8	.....	90	8.89	nne.	6.7	Altitude of St.Cu. base about 1,000 m.
3:24	967.2	10.7	74	nne.	4.9	823	923.8	5.9	1.13	93	8.64	nne.	6.9	
						1,000	904.1	4.5	.....	96	8.08	nne.	6.4	
3:29	967.2	10.8	74	nne.	5.4	1,245	877.1	2.5	0.79	100	7.31	nne.	5.8	
						1,000	904.1	4.4	.....	97	8.12	nne.	5.1	
3:37	967.2	10.8	74	nne.	4.5	882	917.2	5.3	1.30	95	8.46	nne.	4.7	
						750	932.2	7.0	.....	87	8.72	nne.	4.6	
						500	960.8	10.3	.....	72	9.02	nne.	4.5	
3:48	967.2	11.0	69	nne.	4.5	444	967.2	11.0	.....	69	9.06	nne.	4.5	8/10 St.Cu., nne.

May 28, 1918 (No. 1).

A. M.														
6:34	970.9	7.9	85	nne.	3.6	444	970.9	7.9	.....	85	9.05	nne.	3.6	10/10 St.Cu., ene.
						500	964.5	7.7	.....	81	8.51	nne.	5.0	
6:37	970.9	7.9	85	nne.	3.6	741	936.5	6.9	0.34	62	6.17	ene.	11.1	
						750	935.8	6.8	.....	63	6.22	ene.	10.9	
						1,000	907.5	4.8	.....	84	7.22	ene.	6.3	
6:55	970.9	8.1	82	nne.	4.9	1,031	903.9	4.6	0.79	87	7.38	ene.	5.7	
						1,250	879.8	3.2	.....	90	6.92	ene.	5.4	
						1,500	853.0	1.7	.....	94	6.50	ene.	5.0	Altitude of St.Cu. base about 1,650 m.
9:00	970.3	9.8	69	ne.	7.2	1,744	827.5	0.2	0.62	98	6.08	ene.	4.6	
						1,750	827.0	0.3	.....	97	6.05	ene.	4.6	
10:19	970.8	10.6	65	ne.	5.8	1,960	806.0	3.5	−7.05	67	5.26	ene.	3.0	
10:23	970.9	10.7	65	ne.	4.5	1,929	809.1	−0.4	0.68	95	5.61	ene.	3.8	
						1,750	827.5	0.8	.....	90	5.82	ene.	4.3	
						1,500	853.6	2.5	.....	83	5.34	e.	4.9	
						1,250	880.0	4.2	.....	75	6.19	e.	5.6	
10:37	971.0	10.7	64	ne.	7.6	1,165	889.6	4.8	0.69	73	6.28	e.	5.8	
						1,000	908.0	5.9	.....	68	6.32	ene.	6.1	
10:50	971.2	10.8	62	ne.	5.4	861	923.4	6.9	0.94	64	6.37	ene.	6.4	
						750	936.5	7.9	.....	63	6.71	ene.	6.2	
						500	965.1	10.3	.....	61	7.64	ne.	5.9	
10:58	971.3	10.8	60	ne.	5.8	444	971.3	10.8	.....	60	7.77	ne.	5.8	10/10 St.Cu., ene.

May 28, 1918 (No. 2).

P. M.														
1:59	967.6	12.9	66	ene.	6.7	444	967.6	12.9	.....	66	9.82	ene.	6.7	10/10 St.Cu., ene.
						500	961.0	12.3	.....	68	9.73	ene.	6.7	
						750	932.5	9.5	.....	78	9.26	ene.	6.8	
						1,000	905.1	6.9	.....	87	8.66	ene.	7.0	Altitude of St.Cu. base about 1,400 m.
2:48	967.6	13.6	65	ene.	5.8	1,107	893.3	5.5	1.12	91	8.22	ene.	7.0	
						1,250	877.3	4.0	.....	95	7.72	ene.	6.8	
3:48	966.7	13.3	71	e.	4.0	1,467	854.0	1.7	1.06	100	6.91	ene.	6.4	
						1,500	850.2	1.9	.....	98	6.87	ene.	6.3	
						1,750	824.5	3.4	.....	83	6.47	ene.	5.8	
3:51	966.7	13.3	71	e.	8.0	1,874	812.3	4.2	−0.56	75	6.19	ene.	5.5	
						1,750	824.5	3.6	.....	85	6.72	ene.	5.3	Altitude of St.Cu. base about 1,350 m.
4:07	966.5	13.2	71	e.	7.6	1,556	844.7	2.6	0.65	100	7.37	ene.	5.0	
						1,500	850.2	3.0	.....	99	7.50	ene.	5.0	
4:18	966.6	13.7	73	e.	5.8	1,264	875.8	4.5	1.18	95	8.00	ene.	5.2	
						1,250	877.3	4.6	.....	95	8.06	ene.	5.2	
						1,000	904.4	7.6	.....	86	8.98	e.	5.2	
4:28	966.7	13.5	70	e.	6.7	806	925.9	9.9	0.99	79	9.64	e.	5.2	
						750	932.0	10.5	.....	77	9.78	e.	5.4	
						500	960.1	12.9	.....	68	10.12	e.	6.5	
4:35	966.7	13.5	66	e.	6.7	444	966.7	13.5	.....	66	10.21	e.	6.7	8/10 St.Cu., ene.; 2/10 Cu., ene.

May 29, 1918.

P. M.														
2:04	965.5	14.8	88	s.	5.4	444	965.5	14.8	.....	88	14.81	s.	5.4	10/10 St.Cu., s.
						500	959.2	14.3	.....	89	14.51	s.	5.7	Altitude of St.Cu. base about 650 m.
						750	931.0	12.3	.....	93	13.31	s.	6.8	Altitude of St.Cu. base about 700 m.
2:21	965.3	14.9	88	s.	5.8	964	907.5	10.6	0.81	96	12.27	s.	7.8	
						1,000	903.7	10.5	.....	96	12.19	s.	8.0	
						1,250	876.6	9.7	.....	96	11.55	ssw.	9.5	
						1,500	850.2	8.8	.....	96	10.88	ssw.	11.0	
						1,750	825.1	8.0	.....	96	10.30	ssw.	12.5	
						2,000	800.7	7.2	.....	96	9.75	sw.	13.9	
3:42	965.0	15.0	88	s.	5.4	2,027	798.0	7.1	0.33	96	9.69	sw.	14.1	Altitude of St.Cu. base about 750 m.
						2,250	776.7	6.1	.....	89	8.38	sw.	14.6	
						2,500	753.0	5.0	.....	81	7.06	sw.	15.1	
						2,750	730.2	3.9	.....	74	5.98	sw.	15.7	
3:01	964.8	15.0	88	s.	2.7	2,840	722.3	3.5	0.44	71	5.57	sw.	15.9	
						3,000	708.0	2.1	.....	74	5.26	sw.	16.3	
3:25	964.6	15.2	88	s.	4.5	3,250	686.4	0.0	0.85	79	4.83	wsw.	17.0	
						3,500	665.9	−1.0	.....	69	3.88	wsw.	16.6	
						3,750	645.7	−1.9	.....	58	3.03	w.	16.2	
3:46	964.3	15.7	85	s.	4.0	3,793	642.0	−2.1	0.76	58	2.98	w.	16.1	
						3,750	645.7	−1.6	.....	58	3.10	w.	17.9	
4:03	964.1	16.0	86	s.	4.9	3,661	653.4	−0.6	0.67	57	3.31	w.	21.6	
						3,500	666.8	0.5	.....	58	3.67	w.	20.7	Altitude of St.Cu. base about 800 m.
						3,250	688.0	2.1	.....	60	4.27	w.	19.3	
4:23	963.8	16.2	86	s.	3.6	3,030	706.4	3.6	0.79	61	4.83	w.	18.0	
						3,000	709.3	3.8	.....	61	4.89	w.	17.7	
						2,750	731.0	5.8	.....	60	5.53	w.	14.8	
						2,500	753.3	7.8	.....	58	6.14	wsw.	11.9	
4:54	963.2	16.2	86	s.	3.1	2,421	760.5	8.4	0.36	58	6.39	wsw.	11.0	
						2,250	776.2	9.0	.....	62	7.12	wsw.	10.9	

TABLE 8.—*Free-air data from kite flights at Ellendale Aerological Station, May, 1918*—Continued.

May 29, 1918—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
						2,000	799.5	9.9	.....	67	8.17	wsw.	10.8	
						1,750	823.9	10.8	.....	73	9.45	sw.	10.6	
5:10	963.0	16.0	87	s.	1.8	1,549	844.2	11.5	−0.36	77	10.45	sw.	10.5	
						1,500	849.0	11.3	.....	79	10.58	sw.	9.9	
5:13	963.0	16.0	87	s.	4.0	1,246	875.4	10.4	0.48	92	11.60	sw.	6.8	
						1,000	901.7	11.6	.....	93	12.70	ssw.	6.6	
5:21	962.9	16.0	87	s.	4.0	808	922.3	12.5	0.96	93	13.48	ssw.	6.4	
						750	928.7	13.1	.....	92	13.87	ssw.	5.9	
						500	956.4	15.5	.....	87	15.32	s.	3.6	Altitude of St.Cu. base about 950 m.
5:27	962.9	16.0	86	s.	3.1	444	962.9	16.0	.....	86	15.63	s.	3.1	10/10 St.Cu., s.
May 30, 1918.														
P. M.														
5:58	952.6	25.0	50	sw.	6.7	444	952.6	25.0	.....	50	15.84	sw.	6.7	5/10 Ci.St., sw.; 1/10 Ci.Cu., sw.; 1/10 Cu., sw.
						500	946.6	24.3	.....	51	15.50	sw.	6.8	Solar halo, 22° radius from 5:45 to 6:05 p. m.
						750	919.8	21.4	.....	57	14.53	sw.	7.1	
						1,000	893.2	18.4	.....	63	13.33	ssw.	7.5	10/10 A.St., sw.
7:37	952.8	21.9	75	ssw.	4.9	1,078	885.2	17.5	1.18	65	13.00	ssw.	7.6	
						1,250	867.4	15.7	.....	74	13.20	ssw.	6.8	
7:57	953.0	21.2	80	ssw.	4.0	1,420	850.5	13.8	1.08	82	12.94	ssw.	6.0	
						1,500	842.3	13.2	.....	80	12.14	ssw.	5.9	
						1,750	817.5	11.2	.....	74	9.84	ssw.	5.6	
						2,000	793.3	9.3	.....	68	7.97	sw.	5.2	
						2,250	770.0	7.3	.....	62	6.34	sw.	4.9	Lightning in s.
8:53	952.6	19.7	87	s.	3.6	2,495	746.9	5.4	0.78	56	5.02	sw.	4.6	
						2,750	724.2	5.6	.....	40	3.64	sw.	9.1	
8:55	952.6	19.7	87	s.	3.6	2,856	714.6	5.8	−0.11	34	3.13	sw.	11.0	
						3,000	702.5	5.0	.....	32	2.79	sw.	12.7	
9:00	952.6	19.6	86	s.	4.0	3,215	684.4	3.8	0.82	29	2.33	wsw.	15.2	Lightning vivid and continued in s. to end of flight.
						3,000	702.5	6.1	.....	21	1.98	sw.	12.6	
9:13	952.5	19.3	88	s.	3.1	2,930	708.8	6.9	−0.28	19	1.89	sw.	11.8	
						2,750	724.7	6.4	.....	23	2.21	sw.	9.4	
9:16	952.5	19.2	89	s.	3.1	2,683	730.7	6.2	0.77	25	2.37	sw.	8.5	
						2,500	747.0	7.6	.....	29	3.03	sw.	8.6	
						2,250	770.0	9.5	.....	34	4.04	sw.	8.7	
						2,000	793.3	11.4	.....	39	5.26	ssw.	8.8	
						1,750	817.5	13.4	.....	44	6.76	ssw.	8.8	
						1,500	842.3	15.3	.....	49	8.52	ssw.	8.9	
						1,250	867.4	17.2	.....	54	10.59	s.	9.0	
						1,000	892.8	19.1	.....	59	13.04	s.	9.1	
9:52	952.3	19.0	89	ese.	4.0	793	914.6	20.7	−0.54	63	15.38	s.	9.2	
						750	919.0	20.5	.....	66	15.92	s.	8.3	
						500	946.1	19.1	.....	85	18.79	sse.	3.2	
10:01	952.3	18.8	89	sse.	2.0	444	952.3	18.8	.....	89	19.31	sse.	2.0	8/10 A.St, sw.; 2/10 St.Cu., sw.
May 31, 1918.														
A. M.														
8:10	948.5	17.3	88	s.	2.7	444	948.5	17.3	.....	88	17.38	s.	2.7	9/10 St. Cu., ssw.
						500	942.2	17.1	.....	86	16.77	s.	4.3	
						750	915.0	16.3	.....	78	14.45	s.	11.3	
8:18	948.5	17.6	87	s.	3.6	825	907.1	16.0	0.34	75	13.64	s.	13.4	
						1,000	888.4	15.3	.....	72	12.51	s.	11.6	
8:34	948.4	18.5	85	s.	5.8	1,135	874.6	14.7	0.42	70	11.71	s.	10.2	
						1,250	862.6	13.8	.....	71	11.20	s.	9.7	Altitude of St.Cu. base about 1,000 m.
						1,500	837.4	11.9	.....	75	10.45	s.	8.6	
9:06	948.1	19.4	81	s.	6.3	1,677	819.9	10.5	0.77	77	9.78	s.	7.8	
						1,750	812.8	10.3	.....	76	9.52	s.	8.7	
						2,000	788.4	9.4	.....	75	8.84	s.	11.6	2/10 A.Cu., sw.; 6/10 St.Cu., s.
9:50	947.7	19.7	79	s.	5.8	2,216	767.9	8.7	0.33	73	8.21	s.	14.1	
						2,250	764.8	8.4	.....	73	8.04	s.	14.2	
						2,500	741.5	6.6	.....	75	7.31	s.	15.4	
						2,750	719.3	4.7	.....	78	6.66	s.	16.5	
						3,000	697.0	2.9	.....	80	6.02	s.	17.6	
10:16	947.2	20.5	77	sse.	2.7	3,036	694.5	2.6	0.74	80	5.90	s.	17.8	
						3,250	676.0	1.4	.....	84	5.68	s.	18.5	
						3,500	655.6	0.1	.....	89	5.47	s.	19.4	
11:08	946.1	21.8	73	sse.	7.6	3,739	635.8	−1.2	0.55	94	5.20	s.	20.2	
						3,500	655.6	0.2	.....	93	5.77	s.	19.4	
						3,250	676.0	1.6	.....	93	6.38	s.	18.6	
						3,000	697.0	3.0	.....	92	6.97	s.	17.8	
						2,750	718.2	4.4	.....	92	7.70	s.	16.9	
						2,500	740.0	5.9	.....	91	8.45	s.	16.1	10/10 St.Cu., s.
11:58	945.2	21.0	75	s.	7.6	2,369	751.5	6.6	0.54	91	8.87	s.	15.7	
						2,250	762.5	7.2	.....	91	9.25	s.	16.0	
						2,000	785.5	8.6	.....	90	10.05	s.	16.6	
						1,750	810.0	9.9	.....	89	10.86	s.	17.2	
P. M.														
12:18	945.0	20.1	77	s.	9.4	1,647	819.9	10.5	0.67	89	11.30	s.	17.5	
						1,500	834.5	11.5	.....	88	11.94	s.	16.6	
						1,250	859.4	13.2	.....	86	13.05	s.	14.9	
						1,000	885.1	14.8	.....	84	14.14	s.	13.3	
12:40	944.7	20.3	75	s.	9.8	886	897.2	15.6	1.02	83	14.71	s.	12.6	
						750	911.5	17.0	.....	81	15.70	s.	11.6	
						500	938.1	19.5	.....	77	17.46	sse.	9.8	
12:52	944.6	20.1	76	sse.	9.4	444	944.6	20.1	.....	76	17.88	sse.	9.4	10/10 St.Cu., s.

TABLE 9.—*Free-air data from kite flights at Ellendale Aerological Station, June, 1918.*

June 1, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
6:21	950.8	12.5	74	w.	11.2	444	950.8	12.5	.....	74	10.72	w.	11.2	2/10 Ci.St., w.
						500	944.4	12.4	.....	73	10.51	w.	12.4	
						750	916.7	12.0	.....	66	9.26	wnw.	17.9	
6:30	951.0	12.8	71	w.	12.1	970	893.2	11.6	0.17	61	8.33	wnw.	22.7	Cloudless.
						1,000	890.0	11.4	.....	61	8.22	wnw.	22.6	
						1,250	863.9	9.5	.....	60	7.12	wnw.	22.0	
6:59	951.3	13.5	68	w.	11.6	1,502	838.0	7.7	0.73	60	6.31	wnw.	21.3	
						1,750	813.3	6.6	.....	55	5.36	wnw.	20.9	
						2,000	788.7	5.4	.....	50	4.48	wnw.	20.6	
7:13	951.6	13.8	68	w.	13.4	2,049	784.2	5.2	0.46	49	4.34	wnw.	20.5	
						2,250	764.8	4.1	.....	45	3.69	wnw.	20.6	
						2,500	741.7	2.6	.....	41	3.02	wnw.	20.8	
7:20	951.7	13.9	68	wnw.	13.0	2,593	733.6	2.1	0.62	39	2.77	wnw.	20.9	
						2,500	741.7	2.7	.....	41	3.04	wnw.	21.3	
						2,250	764.8	4.4	.....	46	3.85	wnw.	22.2	
						2,000	788.7	6.1	.....	52	4.90	wnw.	23.1	
						1,750	813.3	7.8	.....	57	6.03	wnw.	24.1	
7:33	952.0	14.1	68	wnw.	11.6	1,585	830.3	8.9	0.41	61	6.95	wnw.	24.7	
						1,500	839.3	9.2	.....	62	7.22	wnw.	23.3	
8:39	953.1	15.2	69	w.	11.2	1,292	861.4	10.1	0.15	65	8.03	wnw.	19.8	
						1,250	865.8	10.6	.....	72	9.20	wnw.	18.3	
						1,000	892.4	11.0	.....	77	10.11	w.	17.3	
8:54	953.2	15.8	70	w.	12.5	840	909.5	11.2	1.11	80	10.64	w.	16.6	
						750	919.7	12.2	.....	77	10.94	w.	15.1	
						500	947.1	15.0	.....	71	12.11	w.	10.8	
9:03	953.3	15.6	69	w.	9.8	444	953.3	15.6	.....	69	12.23	w.	9.8	Cloudless.

June 2, 1918.

P. M.														
12:24	966.1	17.7	44	sw.	6.3	444	966.1	17.7	.....	44	8.91	sw.	6.3	2/10 A.Cu., w.; 8/10 St.Cu., w.
						500	959.4	17.0	.....	44	8.53	sw.	6.7	
						750	931.5	13.9	.....	45	7.15	sw.	8.6	
12:33	966.0	17.2	53	sw.	6.7	784	928.0	13.5	1.24	45	6.96	sw.	8.9	Rain from 12:31 to 12:50 p. m.
						1,000	904.4	11.4	.....	49	6.61	wsw.	9.1	
						1,250	877.3	9.0	.....	53	6.08	wsw.	9.3	
						1,500	851.0	6.5	.....	57	5.52	w.	9.5	
1:08	965.8	18.2	43	sw.	5.8	1,556	845.5	6.0	0.97	58	5.42	w.	9.6	
						1,750	825.4	4.3	.....	62	5.15	w.	10.6	
						2,000	800.4	2.2	.....	68	4.87	wnw.	11.9	
						2,250	776.0	0.0	.....	74	4.52	wnw.	13.2	
1:30	965.4	18.8	39	sw.	4.5	2,380	763.6	−1.1	0.86	77	4.29	wnw.	13.9	
						2,500	751.8	−1.9	.....	72	3.76	wnw.	14.7	3/10 A.Cu., w.; 6/10 St.Cu., w.
						2,750	728.2	−3.5	.....	62	2.83	wnw.	16.3	
1:56	964.9	19.1	37	sw.	5.8	2,812	722.6	−3.9	0.65	60	2.65	wnw.	16.7	
						3,000	705.7	−5.1	.....	70	2.79	wnw.	17.5	
						3,250	683.8	−6.6	.....	84	2.94	wnw.	18.6	
2:08	964.8	19.2	37	sw.	6.3	3,315	678.2	−7.0	0.73	87	2.94	wnw.	18.9	
						3,250	683.8	−6.5	.....	83	2.93	wnw.	19.1	
						3,000	706.1	−4.4	.....	70	2.95	wnw.	19.7	
						2,750	729.0	−2.3	.....	56	2.82	wnw.	20.4	
2:35	964.6	19.6	40	sw.	5.8	2,708	732.8	−1.9	0.68	54	2.82	wnw.	20.5	
						2,500	751.8	−0.5	.....	63	3.69	wnw.	17.3	
						2,250	776.0	1.2	.....	74	4.93	wnw.	13.4	
3:00	964.5	19.7	38	sw.	2.7	2,178	782.9	1.7	0.97	77	5.32	wnw.	12.3	
						2,000	800.4	3.4	.....	73	5.69	w.	11.0	
						1,750	825.4	5.8	.....	68	6.27	w.	9.1	
3:15	964.2	20.1	38	sw.	5.8	1,568	843.9	7.6	1.13	64	6.68	wsw.	7.8	
						1,500	850.9	8.4	.....	62	6.83	wsw.	7.7	
						1,250	876.5	11.2	.....	56	7.45	wsw.	7.5	
						1,000	903.1	14.0	.....	49	7.83	sw.	7.2	
3:36	963.9	20.3	41	sw.	7.2	813	923.1	16.1	1.14	44	8.05	sw.	7.0	
						750	930.0	16.8	.....	43	8.23	sw.	6.8	
						500	957.4	19.7	.....	41	9.41	ssw.	6.0	
3:41	963.8	20.3	41	ssw.	5.8	444	963.8	20.3	.....	41	9.77	ssw.	5.8	9/10 St.Cu., w.

June 4, 1918.

P. M.														
6:05	965.2	20.0	50	ese.	2.0	444	965.2	20.0	.....	50	11.69	ese.	2.0	4/10 A.Cu., wsw.
						500	959.4	19.4	.....	53	11.94	ese.	2.2	
						750	931.8	17.0	.....	65	12.60	ese.	3.0	4/10 A.Cu., wsw.; 4/10 St.Cu., sse.
						1,000	904.4	14.5	.....	77	12.71	se.	3.8	
						1,250	877.9	12.1	.....	88	12.43	se.	4.6	
8:25	965.5	17.4	69	nne.	6.3	1,388	863.5	10.7	0.99	95	12.23	se.	5.1	Altitude of St. Cu. base about 1,800 m.
						1,500	851.7	9.8	.....	95	11.51	se.	5.4	
						1,750	826.1	7.8	.....	93	9.84	sse.	6.1	
						2,000	801.8	5.8	.....	92	8.48	s.	6.8	
8:52	965.5	17.1	68	ene.	2.7	2,059	795.9	5.3	0.80	92	8.20	s.	7.0	
						2,250	777.3	4.0	.....	96	7.80	ssw.	7.5	
9:40	965.8	16.2	72	ene.	6.3	2,416	761.8	2.8	0.70	100	7.47	ssw.	7.9	
						2,500	753.7	2.5	.....	96	7.54	ssw.	7.8	
						2,750	730.6	1.5	.....	84	5.72	sw.	7.4	10/10 St.Cu., sse.
9:49	965.8	16.2	71	ene.	7.6	2,926	715.2	0.8	0.39	76	4.92	sw.	7.1	
						3,000	708.4	0.4	.....	77	4.84	sw.	7.0	
						3,250	687.0	−1.0	.....	82	4.61	sw.	6.5	
						3,500	666.1	−2.5	.....	87	4.32	wsw.	6.0	
						3,750	645.8	−3.9	.....	91	4.01	wsw.	5.5	
						4,000	625.5	−5.3	.....	96	3.75	wsw.	5.0	
10:07	965.9	16.2	70	ene.	8.5	4,055	621.3	−5.6	0.64	97	3.70	wsw.	4.9	
						4,000	625.5	−5.2	.....	97	3.82	wsw.	5.2	Rain from 10:26 to 11:35 p. m.

TABLE 9.—*Free-air data from kite flights at Ellendale Aerological Station, June, 1918*—Continued.

June 4, 1918—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
						3,750	646.6	−3.5	.....	97	4.42	wsw.	6.5	
						3,500	667.2	−1.7	.....	97	5.14	sw.	7.8	
						3,250	688.4	0.1	.....	97	5.97	sw.	9.1	Lightning in north from 10:35 to 11:00 p. m.
10:37	966.1	15.4	76	ene.	6.3	3,019	708.1	1.7	0.49	97	6.70	sw.	10.3	
						3,000	709.8	1.8	.....	96	6.68	sw.	10.3	Light thunder in n. at 10:50 p. m.
						2,750	730.6	3.0	.....	94	7.13	sw.	10.6	
						2,500	754.1	4.3	.....	91	7.56	ssw.	10.8	
						2,250	777.3	5.5	.....	88	7.95	ssw.	11.1	
						2,000	801.8	6.7	.....	85	8.34	s.	11.3	
10:58	966.2	14.8	81	e.	3.1	1,900	811.1	7.2	0.62	84	8.53	s.	11.4	
						1,750	826.7	8.1	.....	85	9.18	s.	10.6	
						1,500	852.1	9.7	.....	87	10.47	sse.	9.3	
11:12	966.1	14.7	83	e.	5.4	1,420	880.4	10.2	0.80	87	10.83	sse.	8.9	
						1,250	877.9	11.6	.....	74	10.11	sse.	10.1	
						1,000	904.4	13.5	.....	56	8.66	sse.	11.8	
11:26	966.0	14.7	81	e.	5.8	880	917.4	14.5	0.07	47	7.76	sse.	12.6	
						750	931.8	14.6	.....	57	9.47	se.	10.6	
						500	959.8	14.8	.....	76	12.79	e.	6.7	
11:31	966.0	14.8	80	e.	5.8	444	966.0	14.8	.....	80	13.46	e.	5.8	7/10 St.Cu., sse.

June 5, 1918 (No. 1).

A. M.														
11:00	961.8	22.2	67	sw.	5.4	444	961.8	22.2	.....	67	17.94	sw.	5.4	6/10 Cu., sw.
						500	956.3	20.9	.....	67	16.56	sw.	5.8	
11:05	961.8	22.2	68	sw.	5.8	602	944.4	18.5	2.34	68	14.48	sw.	6.5	
						750	928.0	17.5	.....	75	15.00	sw.	6.8	
11:15	961.7	22.4	67	sw.	5.8	892	912.9	16.6	0.66	82	15.49	sw.	7.1	
						1,000	901.5	15.5	.....	87	15.32	sw.	7.7	
11:24	961.7	22.2	67	sw.	4.0	1,165	884.0	13.8	1.15	94	14.83	sw.	8.7	
						1,000	901.5	15.9	.....	87	15.72	sw.	7.1	
P. M.														
12:12	961.4	23.9	66	sw.	4.5	799	922.8	18.5	1.28	78	16.61	sw.	5.1	
						750	928.0	19.1	.....	76	16.80	sw.	4.8	
12:32	961.1	24.5	63	sw.	4.5	581	946.0	21.3	2.41	67	16.97	sw.	3.9	
						500	956.3	23.3	.....	63	18.02	sw.	4.3	
12:37	961.1	24.6	61	sw.	4.5	444	961.1	24.6	.....	61	18.87	sw.	4.5	8/10 St.Cu., sw.

June 5, 1918 (No. 2).

P. M.														
2:07	959.3	25.5	58	sw.	5.4	444	959.3	25.5	.....	58	18.93	sw.	5.4	6/10 Cu., sw.
						500	953.3	24.9	.....	60	18.90	sw.	5.5	
						750	926.1	22.1	.....	68	18.09	sw.	5.8	
						1,000	899.5	19.3	.....	77	17.24	sw.	6.2	
3:24	958.3	26.9	56	sw.	6.3	1,181	880.4	17.3	1.11	83	16.39	sw.	6.4	
						1,250	873.3	16.6	.....	85	16.06	sw.	6.5	
						1,500	847.7	14.2	.....	91	14.73	sw.	6.9	
						1,750	823.0	11.7	.....	98	13.48	wsw.	7.3	
4:06	957.7	26.0	55	sw.	5.8	1,841	813.6	10.8	0.98	100	12.95	wsw.	7.5	
						2,000	798.4	9.6	.....	93	11.11	wsw.	8.4	Altitude of Cu. base about 1,600 m.
						2,250	774.6	7.8	.....	83	8.78	w.	9.7	
4:50	957.7	26.0	55	sw.	5.4	2,479	753.4	6.1	0.74	73	6.88	w.	11.0	
						2,500	751.3	5.9	.....	74	6.87	w.	11.1	
						2,750	728.8	3.0	.....	86	6.52	w.	11.8	
						3,000	706.5	0.1	.....	97	5.97	w.	12.6	
5:03	957.7	26.0	56	ssw.	6.7	3,062	701.0	−0.6	1.15	100	5.81	w.	12.8	
						3,000	706.5	2.0	.....	66	4.60	w.	11.9	
5:10	957.6	26.0	56	ssw.	7.6	2,991	705.8	2.4	4.23	61	4.43	w.	11.8	
						3,000	706.5	2.4	.....	61	4.43	w.	11.8	
						3,250	684.7	1.0	.....	60	3.94	w.	12.6	Lightning and light thunder in nnw. at 5:20 p. m.
						3,500	663.6	−0.4	.....	59	3.49	w.	13.4	
						3,750	643.5	−1.7	.....	58	3.07	w.	14.1	
5:32	957.4	25.8	57	s.	6.3	3,874	633.9	−2.4	0.68	57	2.85	w.	14.5	8/10 St.Cu., w.
						3,750	643.7	−1.4	.....	58	3.16	w.	14.7	
						3,500	664.3	0.6	.....	60	3.83	w.	15.1	
5:55	957.2	24.5	64	s.	5.4	3,406	672.5	1.4	0.71	61	4.12	w.	15.3	3/10 Cl.St., w.; 4/10 Cu., sw.; 2/10 St.Cu., sw.
						3,250	685.4	2.5	.....	70	5.12	w.	14.2	Rain began 5:58 p. m. and continued at end of flight.
						3,000	707.0	4.3	.....	85	7.06	wnw.	12.4	
6:17	957.7	24.0	69	n.	13.4	*2,747	729.9	6.1	.....	100	9.42	wnw.	*10.6	

June 6, 1918.

A. M.														
8:12	968.2	13.1	81	n.	13.0	444	968.2	13.1	.....	81	12.21	n.	13.0	7/10 St.Cu., n.
						500	962.2	12.2	.....	82	11.65	n.	13.4	
						750	933.8	8.2	.....	89	9.67	n.	15.1	
8:21	968.4	13.1	81	n.	13.0	803	927.5	7.3	1.62	90	9.21	n.	15.5	
8:24	968.4	13.3	78	n.	13.0	994	906.4	9.3	−1.05	55	6.45	nnw.	16.9	
						1,000	906.0	9.3	.....	55	6.45	nnw.	16.9	
						1,250	878.9	7.8	.....	57	6.03	nnw.	16.4	1/10 St.Cu., n.
						1,500	852.5	6.3	.....	59	5.63	nnw.	15.9	
8:40	968.8	13.1	69	n.	14.8	1,646	837.7	5.4	0.60	60	5.38	nnw.	15.6	
						1,750	827.0	4.9	.....	59	5.11	nnw.	15.1	
						2,000	802.3	3.7	.....	55	4.38	nnw.	13.8	

* Kite fell in field. 10/10 Nb., wnw. Storm passed over station at 6:30 p. m. accompanied by heavy thunder and vivid lightning. Hail from 6:52 to 6:59 p. m.

TABLE 9.—*Free-air data from kite flights at Ellendale Aerological Station, June, 1918*—Continued.

June 6, 1918—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
						2,250	778.2	2.5		52	3.80	nw.	12.4	
9:10	969.3	13.8	72	n.	12.5	2,431	760.8	1.6	0.48	49	3.36	nw.	11.5	Few St.Cu., n.
						2,500	754.7	1.2		47	3.13	nw.	11.9	
						2,750	731.5	− 0.4		40	2.36	nw.	13.1	
						3,000	708.8	− 2.0		32	1.65	wnw.	14.4	
						3,250	686.8	− 3.6		25	1.13	wnw.	15.7	
						3,500	665.3	− 5.1		17	0.68	wnw.	16.9	
9:57	969.6	14.0	62	n.	11.6	3,511	664.3	− 5.2	0.63	17	0.67	wnw.	17.0	
						3,750	644.4	− 6.5		17	0.60	wnw.	19.0	
						4,000	623.6	− 7.8		17	0.54	wnw.	21.1	
						4,250	604.0	− 9.2		17	0.47	wnw.	23.3	
						4,500	585.0	−10.5		17	0.42	wnw.	25.4	
10:38	969.8	14.7	63	n.	10.7	4,550	581.6	−10.8	0.54	17	0.41	wnw.	25.8	
						4,750	567.0	−11.6		17	0.38	wnw.	26.4	2/10 Cu., nnw.
						5,000	549.7	−12.7		16	0.33	wnw.	27.3	
11:38	970.2	15.5	62	n.	9.8	5,105	541.8	−13.1	0.53	16	0.31	wnw.	27.6	
						5,000	549.7	−12.4		16	0.33	wnw.	27.1	
						4,750	568.0	−10.8		16	0.39	wnw.	25.8	
						4,500	586.8	− 9.2		16	0.45	wnw.	24.6	
						4,250	605.9	− 7.5		16	0.52	wnw.	23.3	
P. M.														
12:48	970.3	16.1	57	n.	10.3	4,167	612.2	− 7.0	0.62	16	0.54	wnw.	22.9	
						4,000	625.8	− 6.0		16	0.59	wnw.	22.3	
						3,750	645.8	− 4.4		16	0.68	wnw.	21.5	
						3,500	666.6	− 2.8		16	0.77	wnw.	20.6	
						3,250	687.9	− 1.3		16	0.88	wnw.	19.8	
1:31	970.5	16.5	56	n.	10.7	3,029	707.2	0.1	0.44	16	0.98	wnw.	19.0	
						3,000	709.8	0.2		16	0.99	wnw.	18.7	
						2,750	732.1	1.3		16	1.07	wnw.	16.3	3/10 Cu., nnw.
						2,500	755.0	2.4		15	1.09	nw.	13.9	
1:51	970.6	16.0	54	n.	8.5	2,255	778.5	3.5	−1.11	15	1.18	nw.	11.6	
						2,000	803.5	0.7		31	1.99	nw.	11.8	
2:01	970.6	16.2	54	n.	8.5	1,949	808.5	0.1	1.08	34	2.09	nw.	11.8	
						1,750	829.0	2.2		79	5.66	nnw.	10.7	Altitude of Cu. base about 2,000 m.
2:09	970.6	16.2	52	n.	11.6	1,726	831.5	2.5	1.00	84	6.14	nnw.	10.6	
						1,500	854.9	4.8		75	6.45	nnw.	10.7	
						1,250	881.2	7.3		65	6.65	nnw.	10.8	
2:25	970.6	16.4	52	n.	8.9	1,119	895.3	8.6	0.90	60	6.70	nnw.	10.9	
						1,000	908.3	9.7		57	6.86	nnw.	10.4	
2:35	970.6	16.2	51	nnw.	8.0	752	935.8	11.9	1.40	50	6.96	nnw.	9.4	
						500	964.4	15.4		52	9.10	nnw.	7.9	
2:41	970.6	16.2	52	nnw.	7.6	444	970.6	16.2		52	9.58	nnw.	7.6	2/10 Cu., nnw.

June 7, 1918 (No. 1).

A. M.														
7:21	971.7	9.6	81	ssw.	3.1	444	971.7	9.6		81	9.68	ssw.	3.1	6/10 Ci.St., w.; 2/10 A. Cu., w.
						500	965.0	9.7		75	9.02	ssw.	4.3	Faint solar halo from 6:15 to 8:40
						750	936.6	10.1		50	6.18	s.	10.4	a. m.
7:33	971.8	10.0	80	ssw.	6.3	761	935.5	10.1	−1.58	49	6.06	s.	10.7	
						1,000	908.7	8.9		47	5.36	s.	9.6	
						1,250	882.2	7.7		44	4.62	s.	8.4	8/10 Ci.St.,w.; 2/10 A.Cu., w.
						1,500	855.0	6.4		42	4.04	s.	7.3	8/10 A.St., w.; 2/10 A.Cu., w.
9:07	971.6	12.7	66	s.	8.5	1,689	835.8	5.5	0.50	40	3.61	s.	6.4	2/10 A.St., w.; 6/10 St.Cu., w.
9:52	971.6	12.4	67	ssw.	8.0	1,749	829.7	5.9	−0.19	45	4.18	ssw.	3.8	
						1,500	855.8	6.6		53	5.17	ssw.	6.5	
						1,250	881.4	7.3		60	6.14	s.	9.3	8/10 A.St., w.; 2/10 A.Cu., w.
10:27	971.5	14.2	68	s.	8.5	1,187	888.6	7.5	0.52	62	6.43	s.	10.0	Solar halo from 10:15 to 10:45 a. m.
						1,000	908.7	8.5		70	7.77	s.	10.5	
10:40	971.4	14.5	66	s.	8.0	819	928.9	9.4	1.23	77	9.08	s.	10.9	
						750	936.2	10.2		75	9.34	s.	9.6	
						500	965.0	13.3		67	10.23	s.	4.7	
10:47	971.4	14.0	65	s.	3.6	444	971.4	14.0		65	10.39	s.	3.6	2/10 A.St., w.; 8/10 Cu., w.

June 7, 1918 (No. 2)

P. M.														
12:13	970.4	15.2	63	s.	8.9	444	970.4	15.2		63	10.88	s.	8.9	2/10 A.St., w.; 8/10 A.Cu., w.
						500	964.2	14.5		64	10.57	s.	9.3	
						750	935.6	11.2		71	9.44	ssw.	10.9	
12:18	970.3	15.2	62	s.	8.5	842	925.3	10.0	1.31	73	8.96	ssw.	11.5	
12:23	970.2	15.1	63	s.	7.2	989	909.1	8.7	0.89	76	8.55	ssw.	10.7	
						1,000	907.9	8.7		76	8.55	ssw.	10.6	9/10 St.Cu., wsw.
						1,250	880.5	9.8		70	8.48	ssw.	7.7	
12:55	969.7	15.2	63	s.	10.3	1,396	865.1	10.4	−0.42	66	8.32	ssw.	6.0	
						1,500	853.3	9.8		69	8.36	ssw.	6.2	
						1,750	828.6	8.5		76	8.44	ssw.	6.7	
						2,000	804.0	7.1		83	8.37	ssw.	7.1	
						2,250	779.9	5.8		90	8.30	sw.	7.6	Altitude of St.Cu. base about 2,300 m.
						2,500	755.9	4.4		97	8.12	sw.	8.1	Aititude of St.Cu. base about
1:35	969.2	16.1	60	s.	10.3	2,615	745.8	3.8	0.54	100	8.02	sw.	8.3	2,400 m.
						2,750	733.0	3.0		94	7.13	sw.	9.0	
						3,000	710.5	1.6		82	5.63	wsw.	10.3	
						3,250	688.7	0.2		71	4.40	w.	11.5	
						3,500	667.3	−2.3		59	2.97	wnw.	12.8	
						3,750	647.0	−2.7		48	2.34	wnw.	14.1	
2:20	968.7	15.0	64	s.	8.5	3,874	637.0	−3.4	0.57	42	1.93	wnw.	14.7	
						4,000	626.7	−4.1		50	2.16	wnw.	15.0	
						4,250	607.4	−5.4		65	2.52	wnw.	15.7	

TABLE 9.—*Free-air data from kite flights at Ellendale Aerological Station, June, 1918*—Continued.

June 7, 1918 (No. 2)—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\text{ m.}}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
						4,500	588.5	−6.8		80	2.75	wnw.	16.4	
						4,750	570.0	−8.1		95	2.92	wnw.	17.1	
2:37	968.5	15.3	63	s.	8.9	4,785	567.4	−8.3	0.54	97	2.93	wnw.	17.2	
2:44	968.4	15.6	63	s.	9.8	4,827	564.7	−8.2	−0.10	63	1.92	wnw.	15.8	
						4,750	570.0	−8.2		75	2.28	wnw.	15.7	
2:55	968.3	16.0	62	s.	7.6	4,591	582.7	−8.1	0.91	100	3.07	wnw.	15.4	
						4,500	590.1	−7.3		91	2.99	wnw.	15.3	
						4,250	608.2	−5.0		66	2.65	w.	14.9	
						4,000	627.5	−2.7		41	2.00	w.	14.5	
3:23	968.0	15.6	66	s.	6.7	3,955	631.4	−2.3	0.78	37	1.86	w.	14.4	Altitude of St.Cu. base about 3,900 m.
						3,750	647.9	−0.7		64	3.69	w.	14.4	
3:33	967.9	15.4	68	s.	7.6	3,504	668.2	1.2	0.43	97	6.46	w.	14.3	
						3,250	689.3	2.3		97	6.99	w.	13.5	
						3,000	710.5	3.3		97	7.51	w.	12.8	
						2,750	733.0	4.4		97	8.12	w.	12.1	
3:53	967.7	15.3	68	s.	7.6	2,660	741.4	4.8	0.77	97	8.34	w.	11.8	
						2,500	755.9	6.0		95	8.88	w.	11.6	
						2,250	779.4	7.9		93	9.90	wsw.	11.3	
						2,000	803.0	9.9		90	10.98	sw.	11.0	
4:22	967.3	16.2	65	s.	8.5	1,931	809.6	10.4	0.28	89	11.22	sw.	10.9	
						1,750	827.4	9.9		94	11.47	sw.	11.8	
4:34	967.2	15.8	70	s.	8.5	1,576	844.9	9.4	0.22	98	11.55	sw.	12.6	
						1,500	852.4	10.6		96	12.27	sw.	12.6	
						1,250	878.0	10.1		89	11.00	ssw.	12.6	
						1,000	904.8	10.7		83	10.68	s.	12.6	
4:48	967.0	16.1	68	s.	8.0	979	907.5	10.7	0.81	82	10.55	s.	12.6	
4:53	967.0	16.1	68	s.	8.9	833	923.7	11.9	1.11	80	11.14	s.	9.4	Thunder and lightning in s.
						750	932.5	12.8		78	11.53	s.	9.2	
						500	960.5	15.6		71	12.58	s.	8.6	
4:59	966.9	16.2	69	s.	8.5	444	966.9	16.2		69	12.71	s.	8.5	3/10 A.Cu., w.; 4/10 St.Cu., wsw.

June 8, 1918.

A. M.														
6:16	960.3	13.7	93	sw.	4.5	444	960.3	13.7		93	14.58	sw.	4.5	7/10 Cl.St., w.; 2/10 A.Cu., w.
						500	954.2	15.5		84	14.79	sw.	6.4	
6:19	960.3	13.8	93	sw.	4.9	658	936.5	20.6	−3.22	60	14.56	wsw.	11.8	
						750	926.5	20.1		61	14.35	wsw.	11.5	9/10 A.St., wnw.; 1/10 St.Cu., wnw.
						1,000	900.0	18.8		65	14.10	w.	10.9	
						1,250	874.4	17.5		68	13.80	wnw.	10.2	
7:06	960.7	13.9	93	sw.	3.6	1,450	854.3	16.4	0.51	71	13.24	nw.	9.6	Rain began 7:01 a. m. and continued at end of flight. Lightning and thunder in wnw at 7:05 a. m. becoming heavy over station at 7:15 a. m. and ending at 9:05 in ese.
						1,250	874.4	17.4		68	13.51	nw.	10.0	
						1,000	900.0	18.6		65	13.93	wnw.	10.5	
						750	926.8	19.8		61	14.09	wnw.	11.0	
7:14	960.5	13.9	93	sw.	2.7	644	938.2	20.3	−3.20	60	14.29	wnw.	11.2	
						500	954.2	15.7		84	14.99	w.	5.1	
7:17	960.4	13.9	93	wsw.	2.7	444	960.4	13.9		93	14.77	wsw.	2.7	10/10 St. Cu., wnw.

June 9, 1918.

P. M.														
1:31	961.5	24.6	74	nne.	4.9	444	961.5	24.6		74	22.90	nne.	4.9	4/10 Cl.St., wsw.; 4/10 St.Cu., se.
						500	954.8	23.4		79	22.74	ne.	5.0	
2:00	961.5	24.2	76	nne.	7.2	609	943.4	21.0	2.18	89	22.13	ene.	5.1	
						750	927.9	20.0		92	21.51	ene.	5.5	
						1,000	901.7	18.3		96	20.19	ne.	6.3	
3:08	961.4	25.0	73	nne.	4.5	1,041	897.4	18.0	0.82	97	20.02	ne.	6.4	
						1,000	901.7	18.4		95	20.10	ne.	4.9	
						750	927.9	20.8		86	21.13	nne.	5.3	
3:14	961.3	25.0	73	nne.	4.5	716	931.8	21.1	1.36	85	21.28	nne.	5.2	
						500	954.8	24.0		75	22.38	nne.	3.9	
3:19	961.2	24.8	73	nne.	3.6	444	961.2	24.8		73	22.86	nne.	3.6	1/10 Cl.St., wsw.; 5/10 St.Cu., se.

June 10, 1918.

P. M.														
12:32	959.6	31.2	50	ssw.	6.3	444	959.6	31.2		50	22.73	ssw.	6.3	1/10 Cl.Cu., w.; 2/10 Cl.St., w.
						500	953.4	30.7		46	20.32	ssw.	7.6	
12:38	959.5	31.2	49	ssw.	6.7	559	947.2	30.2	0.87	41	17.60	ssw.	9.0	
						750	926.6	28.1		44	16.73	ssw.	8.2	
12:58	959.1	31.2	49	s.	7.2	857	915.7	26.9	1.11	45	15.95	ssw.	7.8	
						1,000	899.8	27.5		26	9.55	sw.	9.2	
1:03	959.0	31.3	49	s.	7.2	1,028	897.9	27.6	−0.41	22	8.13	sw.	9.5	
						1,250	874.8	26.2		22	7.48	sw.	10.3	
						1,500	850.4	24.7		21	6.54	wsw.	11.2	
						1,750	826.8	23.1		21	5.94	wsw.	12.0	
1:39	958.4	31.7	46	s.	8.0	1,822	819.9	22.7	0.62	21	5.79	wsw.	12.3	
						2,000	803.1	20.8		22	5.41	wsw.	11.7	
						2,250	779.8	18.1		24	4.98	wsw.	10.9	
1:45	958.4	31.9	43	s.	8.9	2,329	773.0	17.3	1.07	24	4.74	wsw.	10.6	
						2,500	757.3	15.8		26	4.67	wsw.	11.4	
						2,750	735.5	13.6		28	4.36	wsw.	12.6	
						3,000	714.0	11.4		31	4.18	w.	13.8	
						3,250	693.0	9.2		34	3.96	w.	14.9	
2:20	958.0	32.0	44	sse.	11.2	3,370	683.0	8.2	0.87	35	3.80	w.	15.5	
						3,500	672.1	7.1		38	3.83	w.	16.1	
						3,750	652.0	5.1		45	3.96	w.	17.1	
						4,000	632.3	3.0		52	3.94	w.	18.2	

TABLE 9.—*Free-air data from kite flights at Ellendale Aerological Station, June, 1918*—Continued.

June 10, 1918—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
2:42	957.8	32.0	46	sse.	9.8	4,247	613.4	1.0	0.82	58	3.81	w.	19.3	
						4,500	595.1	−0.7		55	3.17	w.	19.1	2/10 Ci.St., w.
2:52	957.8	32.0	49	sse.	8.9	4,540	592.4	−1.0	0.82	55	3.09	w.	19.1	
						4,500	595.1	−0.6		55	3.20	w.	18.9	
						4,250	614.6	1.8		57	3.97	w.	17.6	
						4,000	634.0	4.1		58	4.75	w.	16.3	
3:10	957.6	32.1	53	s.	8.9	3,993	634.5	4.2	0.94	58	4.78	w.	16.3	
						3,750	653.6	6.5		53	5.13	w.	17.3	
						3,500	673.2	8.8		48	5.44	w.	18.4	
						3,250	693.5	11.2		42	5.59	w.	19.4	
						3,000	714.0	13.5		37	5.72	w.	20.5	
						2,750	735.5	15.8		32	5.74	w.	21.5	
3:40	957.3	32.3	57	s.	11.6	2,616	747.9	17.1	0.95	29	5.66	w.	22.1	
						2,500	757.3	18.2		27	5.64	w.	21.9	
						2,250	779.8	20.6		24	5.82	wsw.	21.3	
						2,000	803.1	23.0		20	5.62	wsw.	20.8	
3:58	957.1	32.3	59	s.	12.1	1,934	809.2	23.6	0.88	19	5.53	wsw.	20.7	
						1,750	826.8	25.2		18	5.77	wsw.	21.4	
						1,500	851.0	27.4		17	6.21	sw.	22.4	
4:20	957.0	33.1	48	s.	13.4	1,412	858.6	28.2	0.00	16	6.12	sw.	22.7	
						1,250	875.3	28.2		23	8.80	ssw.	20.8	
4:31	956.9	32.9	48	ssw.	11.2	1,140	885.2	28.2	0.63	27	10.33	ssw.	19.5	
						1,000	900.2	29.7		32	12.90	ssw.	17.7	
						750	924.8	30.6		40	17.57	ssw.	14.6	
4:45	956.8	32.7	49	ssw.	9.8	646	935.6	31.3	0.64	44	20.12	ssw.	13.3	
						500	950.5	32.2		49	23.57	ssw.	11.4	
4:48	956.8	32.6	51	ssw.	10.7	444	956.8	32.6		51	25.09	ssw.	10.7	2/10 Ci.St., w.

June 11, 1918.

A. M.														
6:40	960.3	20.4	54	nnw.	10.3	444	960.3	20.4		54	12.94	nnw.	10.3	Cloudless.
						500	954.0	20.9		49	12.11	nnw.	12.2	
6:45	960.4	20.5	54	nnw.	9.4	736	928.6	23.0	−0.89	28	7.87	n.	20.1	
						750	926.9	22.9		28	7.82	n.	20.0	
						1,000	900.5	20.7		24	5.86	n.	18.3	
7:00	960.8	21.1	51	n.	10.3	1,063	894.3	20.2	0.86	23	5.45	n.	17.9	
						1,250	875.0	19.2		24	5.34	n.	17.5	
						1,500	850.2	17.7		26	5.26	nnw.	16.8	
						1,750	825.4	16.3		28	5.19	nnw.	16.2	
7:19	961.0	21.9	47	n.	5.4	1,812	819.4	16.0	0.56	28	5.09	nnw.	16.1	
						2,000	801.6	14.6		33	5.48	nnw.	16.8	
7:49	961.4	22.5	47	n.	10.3	2,255	778.3	12.6	0.77	40	5.84	nnw.	18.8	
						2,500	756.0	11.2		36	4.79	nw.	20.8	
8:03	961.5	22.7	46	n.	9.4	2,662	741.4	10.2	0.80	34	4.23	nw.	22.1	
						2,500	755.6	11.9		38	5.29	nw.	23.7	
8:17	961.7	23.1	47	n.	13.0	2,319	772.4	13.7	0.66	43	6.74	nw.	25.5	
						2,250	778.1	14.2		42	6.80	nw.	25.0	
						2,000	802.5	15.8		36	6.46	nw.	23.4	
						1,750	826.2	17.5		31	6.20	nw.	21.7	
8:21	961.7	23.2	47	n.	12.5	1,611	839.5	18.4	−1.38	28	5.92	nw.	20.8	
						1,500	850.2	16.9		21	4.04	n.	20.0	
8:58	962.1	23.9	40	n.	11.2	1,459	855.0	16.3	0.69	18	3.34	n.	19.7	
						1,250	876.2	17.7		23	4.66	n.	18.0	
						1,000	902.9	19.5		30	6.80	n.	16.0	
9:49	962.7	25.1	37	n.	12.5	834	920.4	20.6	1.12	34	8.25	n.	14.7	
						750	929.5	21.6		34	8.77	n.	14.0	
						500	956.0	24.6		33	10.21	n.	12.0	
10:00	962.8	25.0	33	n.	11.6	444	962.8	25.0		33	10.45	n.	11.6	Cloudless.

June 12, 1918.

A. M.														
7:00	965.5	16.2	76	s.	2.2	444	965.5	16.2		76	14.00	s.	2.2	3/10 St.Cu., nw.
						500	959.3	17.7		56	11.34	s.	4.9	
7:04	965.5	16.3	76	s.	3.1	561	952.4	19.4	−2.74	35	7.89	sse.	7.8	
7:07	965.5	16.5	75	s.	3.1	727	934.1	18.7	0.42	41	8.84	sse.	6.4	
						750	931.8	18.8		40	8.68	sse.	6.2	
9:02	965.2	21.2	56	sse.	4.9	974	908.0	19.6	−0.36	35	7.98	sse.	4.6	
						1,000	905.0	19.5		35	7.93	sse.	4.6	
						1,250	878.5	18.1		33	6.85	sse.	5.0	
						1,500	852.8	16.7		30	5.70	sse.	5.3	
11:16	963.9	24.8	51	s.	7.2	1,642	839.0	15.9	0.55	29	5.24	sse.	5.5	2/10 St.Cu., wnw
						1,750	828.0	14.9		32	5.42	sse.	6.0	
						2,000	804.0	12.7		39	5.73	s.	7.3	
						2,250	780.3	10.5		47	5.97	s.	8.5	
11:27	963.7	25.0	50	s.	7.6	2,290	776.7	10.1	0.90	48	5.93	s.	8.7	
						2,500	756.9	9.4		53	6.25	ssw.	9.6	
						2,750	733.9	8.6		59	6.59	sw.	10.7	
						3,000	713.1	7.8		65	6.88	wsw.	11.8	
11:47	963.3	25.3	50	s.	6.7	3,173	698.2	7.2	0.33	69	7.01	w.	12.6	
						3,250	691.8	6.7		67	6.57	w.	12.9	
						3,500	670.7	5.0		61	5.32	wnw.	13.9	
						3,750	650.0	3.3		55	4.26	wnw.	15.0	
P. M.														
12:14	963.0	25.7	44	sse.	8.5	3,809	645.3	2.9	0.86	54	4.07	wnw.	15.2	
						3,750	650.0	3.5		53	4.16	wnw.	15.0	
						3,500	670.1	6.1		50	4.71	w.	14.4	
12:32	962.8	26.0	43	sse.	8.5	3,297	686.8	8.2	0.17	47	5.11	w.	13.8	
						3,250	690.7	8.3		48	5.26	w.	13.7	

TABLE 9.—*Free-air data from kite flights at Ellendale Aerological Station, June, 1918*—Continued.

June 12, 1918—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
						3,000	712.0	8.7		52	5.85	wsw.	13.4	
						2,750	734.8	9.1		57	6.59	wsw.	13.1	
						2,500	756.4	9.6		61	7.29	wsw.	12.8	
						2,250	779.5	10.0		66	8.10	sw.	12.5	
12:48	962.6	25.9	44	se.	8.0	2,134	790.1	10.2	1.02	68	8.47	sw.	12.3	
						2,000	803.0	11.6		61	8.33	ssw.	12.0	
						1,750	826.8	14.1		48	7.72	s.	11.4	
						1,500	851.4	16.7		35	6.65	sse.	10.9	
1:15	962.2	26.4	42	s.	9.8	1,379	863.8	17.9	0.82	29	5.95	sse.	10.6	
						1,250	876.6	19.0		33	7.25	sse.	10.7	
						1,000	902.5	21.0		41	10.20	sse.	10.9	
1:37	961.9	26.5	40	sse.	9.4	855	917.7	22.2	1.09	46	12.31	sse.	11.0	
						750	928.5	23.3		46	13.16	sse.	10.6	
						500	955.1	26.1		46	15.56	sse.	9.6	
1:45	961.8	26.7	46	sse.	9.4	444	961.8	26.7		46	16.12	sse.	9.4	3/10 St.Cu., wnw.

June 13, 1918.

A. M.														
10:17	957.7	28.1	48	n.	2.7	444	957.7	28.1		48	18.25	n.	2.7	7/10 Ci.St., wnw.
						500	951.7	27.7		47	17.46	n.	3.8	
P. M.														
12:58	957.7	29.9	45	nne.	6.3	634	937.4	26.8	0.68	44	15.07	nne.	6.3	
						750	925.3	25.6		48	15.76	nne.	5.8	
1:33	957.7	29.9	45	nne.	8.0	871	912.6	24.3	1.05	53	16.11	nne.	5.2	
						1,000	899.2	22.8		59	16.38	nne.	5.3	
3:03	958.2	27.3	61	nne.	9.8	1,248	874.1	19.9	1.17	70	16.27	nne.	5.4	
3:06	958.2	27.1	62	nne.	9.8	1,418	856.9	20.2	−0.18	44	10.42	nne.	5.4	
						1,500	848.9	19.7		42	9.64	nne.	5.2	
						1,750	824.9	18.0		36	7.43	nne.	4.6	
						2,000	801.3	17.4		30	5.96	nne.	4.0	
3:24	958.6	26.2	64	nne.	11.6	2,061	795.2	16.0	0.71	28	5.09	nne.	3.8	2/10 Ci.St., wnw.; 7/10 St.Cu., wnw.
						2,000	801.3	16.5		30	5.63	nne.	4.2	
						1,750	825.1	18.4		32	6.77	nne.	6.0	
						1,500	849.1	20.3		35	8.34	ne.	7.8	2/10 Ci.St., wnw.; 2/10 St.Cu., wnw.
4:08	959.4	24.5	68	ne.	10.7	1,269	872.5	22.1	−0.40	37	9.84	ne.	9.4	
						1,250	874.2	22.0		39	10.31	ne.	9.3	
						1,000	900.1	21.0		64	15.92	ne.	8.7	
4:18	959.4	24.2	70	ne.	6.7	864	914.2	20.5	0.88	77	18.57	ne.	8.3	
						750	926.5	21.5		74	18.98	ne.	9.0	
						500	953.2	23.7		67	19.64	ne.	10.4	
4:29	959.4	24.2	66	ne.	10.7	444	959.4	24.2		66	19.93	ne.	10.7	2/10 Ci.St., wnw.; 2/10 St.Cu., wnw.

June 14, 1918 (No. 1).

A. M.														
6:52	961.1	16.3	80	ne.	5.4	444	961.1	16.3		80	14.82	ne.	5.4	2/10 Ci.St., nnw.
						500	955.3	16.8		76	14.54	ene.	6.3	
7:05	961.1	17.2	80	ne.	4.5	750	927.4	18.8	−0.82	60	13.02	ese.	10.1	
						1,000	901.3	18.4		52	11.00	ese.	7.6	
						1,250	875.3	18.1		45	9.35	ese.	5.1	
						1,500	849.8	17.7		37	7.49	ese.	2.6	
9:16	961.4	21.1	67	e.	3.6	1,509	849.1	17.7	0.21	37	7.49	ese.	2.5	1/10 Ci.St., nnw.
						1,500	849.8	17.7		37	7.49	ese.	2.5	
						1,250	875.3	18.4		42	8.89	ese.	3.8	
						1,000	901.3	19.1		47	10.39	ese.	4.9	
9:36	961.3	21.7	67	e.	4.0	799	922.5	19.6	−1.16	51	11.63	ese.	5.9	
						750	927.4	19.0		56	12.30	ese.	5.3	
9:38	961.2	21.8	67	e.	4.9	644	939.1	17.8	2.10	66	13.45	ese.	4.1	
						500	955.3	20.8		67	16.46	e.	5.0	
9:42	961.2	22.0	68	e.	5.4	444	961.2	22.0		68	17.98	e.	5.4	Few Ci.St., nnw.

June 14, 1918 (No. 2).

NOON	960.8	25.3	62	se.	2.0	444	960.8	25.3		62	20.00	se.	2.0	Few Ci.St., nnw.
						500	954.4	24.5		63	19.37	se.	4.0	
P. M.														
12:05	960.8	25.7	60	se.	5.8	605	943.2	23.0	1.42	64	17.98	se.	7.8	
						750	927.5	21.8		65	16.98	se.	6.9	
12:40	960.5	26.7	59	se.	6.7	899	911.7	20.5	0.85	66	15.92	se.	5.9	
						1,000	900.6	20.0		64	14.96	se.	5.7	
						1,250	875.0	18.7		60	12.94	sse.	5.1	
						1,500	849.8	17.5		56	11.20	sse.	4.6	Cloudless.
1:47	959.9	27.3	57	se.	6.3	1,593	840.6	17.0	0.56	54	10.47	sse.	4.4	
						1,500	849.8	17.6		56	11.27	sse.	4.5	
						1,250	875.0	19.1		60	13.27	se.	4.9	
						1,000	900.6	20.6		64	15.53	se.	5.2	
2:01	959.8	27.5	57	se.	6.3	956	905.2	20.9	1.24	65	16.07	se.	5.3	
						750	926.6	23.5		59	17.09	se.	6.2	
2:12	959.7	27.5	54	se.	5.8	738	928.2	23.6	1.40	59	17.19	se.	6.2	
						500	953.3	26.9		55	19.50	se.	6.6	
2:18	959.6	27.7	54	se.	6.7	444	959.6	27.7		54	20.06	se.	6.7	Cloudless.

TABLE 9.—*Free-air data from kite flights at Ellendale Aerological Station, June, 1918*—Continued.

June 15, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
8:34	957.7	22.8	87	sse.	6.7	444	957.7	22.8	.....	87	24.15	sse.	6.7	4/10 A.St., wsw.; 5/10 St.Cu., sw. Threatening.
						500	951.4	22.3	.....	88	23.70	sse.	7.9	
						750	924.3	20.0	.....	92	21.51	sse.	13.1	
8:42	957.6	22.5	88	sse.	6.7	785	920.7	19.7	0.91	93	21.34	sse.	13.8	
						1,000	898.0	21.3	.....	69	17.48	sse.	13.4	
						1,250	872.0	23.2	.....	42	11.94	s.	12.9	
8:58	957.4	22.5	88	sse.	8.9	1,328	864.7	23.8	−0.76	33	9.73	s.	12.7	
						1,500	847.5	22.8	.....	42	11.66	s.	12.0	
						1,750	823.6	21.4	.....	54	13.76	ssw.	11.0	
9:17	956.6	22.6	88	s.	4.9	1,857	812.2	20.7	0.58	60	14.65	ssw.	10.5	
						2,000	799.7	19.9	.....	61	14.18	ssw.	10.8	
						2,250	776.0	18.4	.....	63	13.33	ssw.	11.3	
9:38	955.5	23.0	88	s.	8.9	2,285	772.9	18.2	0.60	63	13.17	ssw.	11.4	
						2,500	753.2	17.1	.....	58	11.31	ssw.	11.1	3/10 A.St., wsw.; 5/10 St.Cu., sw.
						2,750	731.5	15.7	.....	52	9.28	sw.	10.8	
						3,000	710.5	14.4	.....	46	7.54	sw.	10.4	
10:18	955.1	23.9	84	s.	11.6	3,106	701.4	13.0	0.70	43	6.44	sw.	10.1	
						3,000	710.6	13.8	.....	45	7.10	sw.	10.5	
						2,750	732.6	15.7	.....	50	8.92	sw.	11.4	Thunder heard at 10:50 a. m. to the n.; storm approaching.
						2,500	754.8	17.7	.....	55	11.14	sw.	12.2	
10:51	956.4	25.2	77	s.	9.8	2,483	756.6	17.8	0.52	55	11.21	sw.	12.3	
						2,250	777.2	19.0	.....	56	12.30	sw.	13.4	
						2,000	800.0	20.3	.....	58	13.82	sw.	14.5	
11:10	956.4	26.3	79	s.	8.9	1,949	806.1	20.6	0.94	58	14.08	sw.	14.8	
						1,750	823.6	22.4	.....	48	13.00	sw.	15.0	
						1,500	847.5	24.7	.....	36	11.20	ssw.	15.2	
11:20	956.1	26.0	79	s.	8.9	1,450	852.3	25.2	−0.58	33	10.58	ssw.	15.3	
						1,250	872.0	24.0	.....	53	15.82	ssw.	13.4	
						1,000	897.4	22.6	.....	77	21.12	ssw.	11.0	
11:25	956.0	25.8	79	s.	9.8	900	907.6	22.0	0.72	87	23.00	ssw.	10.0	
						750	923.5	23.1	.....	85	24.03	ssw.	9.9	
						500	949.9	24.9	.....	82	26.65	s.	9.8	
11:31	955.8	25.3	81	s.	9.8	444	955.8	25.3	.....	81	26.13	s.	9.8	8/10 St.Cu., sw.; 2/10 A. Cu., sw. rain began 11:43 a. m.

June 16, 1918 (No. 1).

A. M.														
6:56	966.4	15.8	76	nne.	10.7	444	966.4	15.8	.....	76	13.64	nne.	10.7	10/10 St., wnw.
						500	960.3	15.3	.....	76	13.21	nne.	12.6	
						750	932.9	13.0	.....	74	11.09	nne.	20.8	
7:00	966.5	15.8	77	nne.	11.2	788	928.0	12.6	0.93	74	10.80	nne.	22.1	
						1,000	905.5	15.2	.....	55	9.50	nne.	16.7	Rain from 7:03 to 7:10 a. m.
7:10	966.6	15.6	78	nne.	10.7	1,151	889.1	17.1	−1.24	41	8.00	nne.	12.9	
						1,250	878.7	17.1	.....	39	7.60	nne.	12.5	
						1,500	853.2	17.2	.....	34	6.67	n.	11.4	
						1,750	828.7	17.2	.....	30	5.89	nnw.	10.3	
7:58	967.2	15.6	77	nne.	11.6	1,839	820.6	17.2	−0.01	28	5.49	nnw.	10.0	
						2,000	805.5	16.1	.....	30	5.49	nnw.	9.0	8/10 St.Cu., wsw.; 2/10 St., wnw.
						2,250	782.6	14.4	.....	32	5.25	nw.	7.3	
8:58	969.1	15.9	74	nne.	6.7	2,315	776.6	13.9	0.33	33	5.24	nw.	6.9	
						2,250	782.6	13.9	.....	33	5.24	nw.	7.1	
						2,000	806.3	13.8	.....	32	5.05	nnw.	7.9	
						1,750	830.3	13.7	.....	32	5.02	n.	8.6	
9:20	969.7	15.9	73	nne.	8.9	1,535	851.5	13.6	−0.59	31	4.83	n.	9.3	
						1,500	854.8	13.4	.....	33	5.07	n.	9.2	
						1,250	880.6	11.9	.....	46	6.41	nne.	8.6	
9:30	969.9	16.3	72	nne.	8.9	1,009	906.7	10.5	0.50	59	7.49	nne.	8.0	
						1,000	907.8	10.9	.....	65	8.48	nne.	8.5	
9:38	970.1	16.1	69	nne.	7.6	788	931.3	11.6	1.11	74	10.11	nne.	9.2	
						750	935.5	12.1	.....	74	10.45	nne.	9.0	
						500	963.8	15.0	.....	72	12.28	nne.	7.9	
9:44	970.2	15.7	72	nne.	6.7	444	970.2	15.7	.....	72	12.84	nne.	6.7	10/10 St.Cu., wsw.

June 16, 1918 (No. 2).

A. M.														
10:28	970.7	15.0	71	nne.	7.2	444	970.7	15.0	.....	71	12.11	nne.	7.2	10/10 St.Cu., wsw.
						500	964.3	14.3	.....	71	11.57	nne.	7.7	Sprinkling rain from 10:28 to 10:55 a. m.
						750	936.5	11.2	.....	73	9.71	nne.	10.1	
10:35	970.8	15.0	71	nne.	8.5	819	928.3	10.4	1.23	74	9.33	nne.	10.8	
						1,000	908.2	11.7	.....	62	8.52	nne.	9.7	
						1,250	881.8	12.9	.....	51	7.59	nne.	8.6	
						1,500	856.2	15.1	.....	30	5.15	nne.	6.6	
11:15	971.0	16.5	68	nne.	8.0	1,538	852.6	15.4	−0.70	27	4.72	nne.	6.4	
						1,750	831.4	14.7	.....	25	4.18	nne.	5.4	
						2,000	807.5	13.9	.....	23	3.65	n.	4.3	
P. M.														
12:37	971.3	16.9	71	nne.	6.7	2,026	805.1	13.8	0.33	23	3.63	n.	4.2	
						2,250	784.5	12.8	.....	38	5.62	nw.	5.9	9/10 St.Cu., wsw.
						2,500	761.6	11.8	.....	54	7.47	wnw.	7.7	
3:02	971.3	18.1	69	nne.	8.0	2,588	753.3	11.4	0.36	60	8.09	w.	8.4	
						2,500	761.6	11.7	.....	58	7.98	w.	8.1	
						2,250	784.5	12.4	.....	50	7.20	nw.	7.2	
						2,000	808.0	13.1	.....	43	6.48	nnw.	6.3	
						1,750	832.5	13.8	.....	36	5.68	n.	5.4	
3:27	971.1	18.8	68	nne.	7.6	1,560	851.1	14.4	0.35	31	5.08	nne.	4.7	9/10 St.Cu., wsw.
						1,500	857.2	14.6	.....	31	5.15	nne.	6.0	
						1,250	883.0	15.5	.....	32	5.64	ne.	11.4	

TABLE 9.—*Free-air data from kite flights at Ellendale Aerological Station, June, 1918*—Continued.

June 16, 1918 (No. 1)—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
3:46	971.0	19.2	66	ne.	8.0	1,243	883.7	15.5	−0.62	32	5.64	ne.	11.6	
						1,000	909.0	14.0	.....	48	7.67	nne.	11.0	
3:52	971.0	19.0	66	nne.	6.7	886	921.8	13.3	1.04	55	8.40	nne.	10.7	
3:58	970.9	19.1	68	nne.	7.6	751	936.5	14.7	1.53	73	12.21	nne.	9.4	
						500	964.3	18.5	.....	69	14.70	ne.	7.9	
4:03	970.9	19.4	68	ne.	7.6	444	970.9	19.4	.....	68	15.32	ne.	7.6	7/10 St.Cu., wsw.
June 17, 1918.														
P. M.														
1:05	970.3	16.7	84	e.	5.8	444	970.3	16.7	.....	84	15.97	e.	5.8	Raining.
						500	964.2	15.5	.....	85	14.68	e.	11.2	10/10 St.Cu., wsw.
1:09	970.3	16.7	84	e.	6.3	547	958.5	14.5	1.46	86	14.20	e.	15.7	
						750	935.9	14.7	.....	73	12.21	e.	15.3	
1:14	970.3	16.7	84	e.	5.8	845	925.5	14.8	−0.10	67	11.28	e.	15.1	
						1,000	908.8	14.8	.....	62	10.43	e.	13.7	
						1,250	882.6	14.7	.....	54	9.03	ese.	11.4	
						1,500	856.9	14.6	.....	46	7.65	ese.	9.1	
1:40	970.3	16.7	85	ene.	7.2	1,642	842.2	14.6	0.03	42	6.98	ese.	7.8	
						1,750	832.2	14.1	.....	59	9.49	ese.	6.9	Rain ended 1:50 p. m.
1:58	970.3	16.7	85	ene.	8.0	1,941	813.1	13.3	0.43	88	13.44	se.	4.3	
						2,000	807.9	13.1	.....	90	13.57	sse.	4.5	Altitude of St.Cu. base about 2,300 m.
2:31	970.3	17.1	83	ene.	7.2	2,225	786.1	12.3	0.34	97	13.88	wsw.	5.4	
						2,000	807.9	13.0	.....	83	12.43	sw.	7.6	
						1,750	832.2	13.9	.....	68	10.80	ssw.	10.0	
						1,500	856.9	14.7	.....	53	8.87	s.	12.4	
2:55	970.3	17.1	82	ene.	8.0	1,262	880.9	15.5	−0.20	38	6.69	sse.	14.7	
						1,250	882.6	15.5	.....	39	6.87	sse.	14.7	
						1,000	908.8	15.0	.....	59	10.06	ese.	14.5	
3:07	970.3	16.9	82	ene.	7.6	771	933.6	14.5	0.64	81	13.37	e.	14.3	
						750	935.9	14.7	.....	81	13.46	e.	13.9	
						500	964.2	16.5	.....	82	15.10	ene.	9.1	
3:12	970.3	16.9	82	ene.	8.0	444	970.3	16.9	.....	82	15.78	ene.	8.0	10/10 St.Cu., wsw.
June 18, 1918.														
P. M.														
12:29	967.4	18.8	85	e.	7.6	444	967.4	18.8	.....	85	18.44	e.	7.6	10/10 St.Cu., e.
						500	960.5	18.1	.....	87	18.02	e.	7.5	Altitude of St.Cu. base about 850 m.
						750	930.2	15.2	.....	97	16.65	e.	7.2	
2:29	966.7	19.0	88	e.	6.3	807	926.5	14.5	1.05	99	16.34	e.	7.1	
						1,000	905.5	14.0	.....	99	15.82	e.	7.0	
2:58	966.5	19.2	88	e.	5.4	1,199	884.4	13.5	0.42	99	15.32	e.	6.9	
						1,000	905.5	13.7	.....	97	15.21	e.	6.0	
						750	930.2	16.2	.....	94	17.31	e.	4.9	
3:06	966.5	19.4	86	e.	4.9	623	946.5	16.9	1.15	93	17.90	e.	4.3	
						500	960.5	18.7	.....	88	18.72	e.	4.7	
3:09	966.5	19.5	86	e.	4.9	444	966.5	19.5	.....	86	19.50	e.	4.9	10/10 St.Cu., e.
June 19, 1918.														
P. M.														
12:34	961.8	19.8	78	ese.	4.9	444	961.8	19.8	.....	78	18.02	ese.	4.9	9/10 St.Cu., se.
						500	955.5	19.0	.....	80	17.69	ese.	5.2	
1:27	961.7	20.4	80	ese.	5.8	645	939.4	17.1	1.08	88	17.16	ese.	5.9	
						750	928.0	16.2	.....	92	16.95	ese.	6.2	Altitude of St.Cu. base about 1,050 m.
2:00	961.5	20.8	76	se.	4.9	872	914.6	15.2	0.84	97	16.75	se.	6.6	
						1,000	901.0	14.6	.....	97	16.12	se.	6.7	
2:38	961.5	21.0	75	sse.	5.8	1,236	876.1	13.4	0.49	97	14.91	sse.	6.9	
						1,250	874.5	13.7	.....	95	14.90	sse.	6.8	
2:45	961.5	21.0	75	sse.	5.8	1,359	863.5	15.9	−2.03	76	13.73	sse.	6.0	
						1,500	848.5	15.5	.....	74	13.03	sse.	5.7	
						1,750	824.0	14.7	.....	70	11.71	sse.	5.2	
						2,000	800.2	13.9	.....	67	10.64	s.	4.8	
3:30	961.3	21.2	77	sse.	4.9	2,180	783.6	13.3	0.42	64	9.77	s.	4.4	
						2,000	800.2	14.2	.....	67	10.85	s.	4.7	
						1,750	824.0	15.5	.....	72	12.68	sse.	5.2	
3:37	961.3	21.2	77	sse.	4.9	1,558	843.4	16.5	−2.11	76	14.27	sse.	5.6	Altitude of St Cu. base about 1,200 m.
						1,500	848.5	15.3	.....	84	14.60	sse.	5.8	
3:40	961.2	21.3	77	sse.	4.0	1,373	862.0	12.6	0.78	100	14.59	sse.	6.2	
						1,250	874.5	13.6	.....	99	15.42	sse.	6.2	
						1,000	900.5	15.5	.....	96	16.91	sse.	6.3	
3:48	961.2	21.6	76	sse.	4.0	857	916.2	16.6	1.13	95	17.95	sse.	6.4	
						750	927.5	17.9	.....	90	18.55	sse.	5.9	
						500	954.9	21.1	.....	79	19.42	sse.	4.8	
3:56	961.1	21.8	76	sse.	4.5	444	961.1	21.8	.....	76	19.85	sse.	4.5	9/10 St.Cu., se.
June 20, 1918.														
A. M.														
5:49	958.7	14.9	100	sw.	4.9	444	958.7	14.9	.....	100	16.94	sw.	4.9	Dense fog from 5:40, becoming light at 7:00, and ending at 8:00 a. m.
						500	952.5	16.1	.....	96	17.57	sw.	6.0	
						750	926.0	21.4	.....	76	19.37	wsw.	9.9	
5:55	958.7	14.9	100	sw.	4.9	782	921.9	22.1	−2.13	74	19.68	wsw.	11.5	
5:59	958.7	14.9	100	sw.	4.9	999	899.1	21.2	0.41	72	18.13	w.	11.5	
						1,250	873.5	21.1	.....	64	16.01	w.	14.2	
6:07	958.7	15.0	100	sw.	5.4	1,278	870.6	21.1	0.04	63	15.77	w.	14.5	
						1,500	848.5	19.5	.....	59	12.38	wnw.	13.1	

TABLE 9.—*Free-air data from kite flights at Ellendale Aerological Station, June, 1918*—Continued.

June 20, 1918—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
						1,750	824.2	16.3	.....	55	10.19	wnw.	11.6	
6:49	958.7	15.7	99	ssw.	4.0	1,959	804.2	16.3	0.71	51	9.45	nw.	10.3	
						2,000	800.3	16.0	.....	51	9.27	nw.	10.5	
						2,250	777.0	13.9	.....	52	8.26	wnw.	12.0	
						2,500	753.9	11.8	.....	54	7.47	wnw.	13.5	
						2,750	732.0	9.7	.....	55	6.62	w.	15.0	
8:00	958.7	19.8	88	ssw.	2.2	2,939	715.5	8.1	0.84	56	6.05	w.	16.1	
						3,000	710.0	7.6	.....	57	5.95	w.	16.5	
						3,250	688.9	5.3	.....	63	5.61	w.	18.2	Few Cu., nw.
						3,500	668.2	3.1	.....	68	5.19	w.	19.9	
						3,750	648.0	0.9	.....	74	4.82	w.	21.6	
8:13	958.7	20.7	87	sw.	2.7	3,856	639.7	0.0	0.96	76	4.64	w.	22.3	
						3,750	648.0	1.1	.....	81	5.36	wsw.	21.3	
						3,500	669.0	3.7	.....	92	7.32	sw.	19.0	
9:14	959.7	23.7	74	nnw.	5.4	3,354	681.2	5.2	0.77	98	8.67	ssw.	17.7	
						3,250	690.0	6.0	.....	96	8.98	ssw.	16.8	
						3,000	711.9	7.9	.....	93	9.90	sw.	14.7	Thunder 9:28 a. m. nw. of station.
						2,750	734.3	9.9	.....	89	10.86	w.	12.6	
						2,500	756.9	11.8	.....	86	11.90	wnw.	10.5	10/10 St.Cu., nw.
9:52	962.5	22.4	72	nne.	3.1	2,394	766.7	12.6	0.57	84	12.26	wnw.	9.6	
						2,250	780.0	13.4	.....	77	11.83	nw.	9.2	
						2,000	803.4	14.8	.....	66	11.11	nw.	8.4	
						1,750	827.2	16.2	.....	55	10.13	nnw.	7.6	Rain began 9:57 a. m. and continued; thunderstorm approached rapidly.
						1,500	851.8	17.6	.....	43	8.66	nnw.	6.8	
						1,250	877.4	19.1	.....	32	7.08	n.	6.0	
10:00	963.1	22.2	75	n.	3.6	1,210	881.6	19.3	1.11	30	6.72	n.	5.9	
						1,000	903.0	21.8	.....	50	13.06	n.	6.4	
10:01	963.1	22.2	76	n.	3.6	993	904.0	21.9	−0.61	51	13.40	n.	6.5	
						750	930.0	20.7	.....	70	17.09	n.	7.1	
10:03	963.2	22.2	76	n.	8.5	732	931.8	20.3	0.66	71	16.91	n.	7.1	
						500	957.2	21.9	.....	75	19.71	n.	8.2	
10:05	963.3	22.2	76	n.	8.5	444	963.3	22.2	.....	76	20.35	n.	8.5	10/10 Nb., nw.

June 21, 1918.

A. M.														
6:10	965.2	13.2	78	nnw.	9.8	444	965.2	13.2	.....	78	11.83	nnw.	9.8	Cloudless.
						500	958.5	12.6	.....	79	11.53	nnw.	10.0	
						750	931.0	10.0	.....	85	10.44	nne.	16.4	
6:20	965.3	13.2	78	n.	9.8	770	928.5	9.8	1.04	85	10.30	nne.	16.8	
						1,000	903.5	10.2	.....	73	9.09	n.	17.4	
6:30	965.4	13.3	78	n.	9.8	1,201	881.6	10.6	−0.19	63	8.05	nnw.	17.9	
						1,250	876.4	10.3	.....	63	7.89	nnw.	18.0	
						1,500	849.9	8.7	.....	65	7.31	nnw.	18.6	
						1,750	824.4	7.0	.....	66	6.61	nnw.	19.3	
6:47	965.4	13.3	78	n.	9.8	1,770	822.6	6.9	0.65	66	6.57	nnw.	19.3	
						2,000	800.0	7.5	.....	41	4.25	nnw.	20.6	
6:52	965.5	13.3	78	n.	9.8	2,101	790.5	7.7	−0.24	30	3.15	nnw.	21.1	
						2,250	776.0	7.0	.....	29	2.91	nnw.	20.4	
						2,500	752.4	5.9	.....	28	2.60	nnw.	19.1	
						2,750	729.9	4.8	.....	26	2.24	nnw.	17.8	
7:17	965.6	13.8	74	n.	12.1	2,937	714.0	3.9	0.45	25	2.02	nnw.	16.9	
						3,000	708.4	3.6	.....	24	1.90	nnw.	17.2	Few Cu., nw.
						3,250	688.0	2.1	.....	21	1.49	nnw.	18.2	
						3,500	667.4	0.7	.....	18	1.16	nnw.	19.3	
						3,750	647.5	−0.7	.....	15	0.86	nnw.	20.3	
						4,000	627.4	−2.1	.....	12	0.62	nnw.	21.4	
						4,250	607.0	−3.5	.....	9	0.41	nnw.	22.5	
8:43	966.3	14.7	69	n.	9.8	4,362	597.7	−4.1	0.54	8	0.35	nnw.	23.0	
						4,250	607.0	−3.5	.....	9	0.41	nnw.	22.3	
						4,000	627.4	−2.2	.....	10	0.51	nnw.	20.7	
						3,750	647.5	−0.9	.....	12	0.68	nnw.	19.1	
						3,500	667.4	0.4	.....	14	0.88	nnw.	17.6	
						3,250	688.0	1.7	.....	15	1.04	nnw.	16.0	
						3,000	709.3	3.0	.....	17	1.29	nnw.	14.4	
10:15	967.3	16.0	65	n.	10.7	2,967	712.6	3.2	0.52	17	1.31	nnw.	14.2	
						2,750	731.5	4.3	.....	19	1.58	nnw.	14.2	
						2,500	754.5	5.6	.....	21	1.91	nnw.	14.3	
10:40	967.5	16.1	65	n.	8.9	2,292	774.1	6.7	0.37	23	2.26	nnw.	14.3	
						2,250	778.1	6.9	.....	23	2.29	nnw.	14.4	
						2,000	802.0	7.8	.....	24	2.54	nnw.	15.1	
						1,750	826.5	8.7	.....	25	2.83	n.	15.9	
10:57	967.6	16.1	63	n.	10.3	1,670	834.9	9.0	−0.25	25	2.87	n.	16.1	
						1,500	852.0	8.6	.....	36	4.02	n.	14.1	
						1,250	878.6	8.0	.....	53	5.69	nne.	11.1	
11:14	967.6	17.0	62	n.	9.8	1,222	881.6	7.9	0.81	55	5.86	nne.	10.8	
						1,000	905.6	9.7	.....	64	7.70	nne.	10.7	
11:23	967.6	16.5	61	n.	8.9	777	930.1	11.5	1.65	74	10.04	nne.	10.6	
						750	933.1	11.9	.....	73	10.17	nne.	10.5	
						500	960.9	16.1	.....	66	12.08	n.	9.2	
11:30	967.6	17.0	64	n.	8.9	444	967.6	17.0	.....	64	12.40	n.	8.9	Few Cu., nw.

June 22, 1918.

A. M.														
7:30	966.5	13.5	84	e.	2.7	444	966.5	13.5	.....	84	12.99	e.	2.7	7/10 Cl.St., nw.
						500	960.0	13.4	.....	81	12.45	e.	3.5	
						750	931.9	12.8	.....	67	9.90	ese.	6.9	
7:47	966.5	14.0	82	ese.	3.6	855	920.4	12.5	0.24	61	8.84	se.	8.3	
						1,000	904.5	11.3	.....	65	8.70	se.	8.0	
						1,250	877.9	9.1	.....	71	8.21	sse.	7.5	
8:32	966.3	15.5	76	sse.	5.8	1,275	875.2	8.9	0.86	72	8.21	sse.	7.4	
						1,500	851.5	10.4	.....	32	4.04	sse.	7.5	

TABLE 9.—*Free-air data from kite flights at Ellendale Aerological Station, June, 1918*—Continued.

June 22, 1918—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
8:45	966.3	15.8	76	sse.	5.4	1,576	844.1	10.9	−0.66	18	2.35	sse.	7.7	
9:45	966.0	17.3	63	s.	5.8	1,699	831.7	10.7	0.16	11	1.42	s.	7.8	9/10 Cl. St., nw.
						1,750	826.6	10.3		12	1.50	s.	7.6	
						2,000	802.0	8.5		15	1.66	ssw.	6.5	
9:52	965.9	17.4	62	s.	8.0	2,074	794.8	8.0	0.66	16	1.72	ssw.	6.2	
						2,000	802.0	8.4		16	1.76	ssw.	6.5	
						1,750	826.6	9.9		16	1.95	s.	7.4	
10:30	965.6	17.2	65	sse.	7.6	1,497	851.8	11.4	−1.59	16	2.16	sse.	8.3	
10:32	965.5	17.2	65	sse.	7.2	1,359	865.8	9.2	0.76	30	3.49	sse.	8.3	
						1,250	876.0	10.0		39	4.79	sse.	8.1	
						1,000	903.0	11.9		58	8.08	sse.	7.8	
10:48	965.3	17.5	64	sse.	6.7	803	925.3	13.4	1.23	74	11.37	sse.	7.5	
						750	931.4	14.0		72	11.51	sse.	7.3	
						500	959.0	17.1		64	12.48	sse.	6.5	
10:52	965.3	17.8	62	sse.	6.3	444	965.3	17.8		62	12.64	sse.	6.3	8/10 A.Cu., nw.; 2/10 St.Cu., sse.

June 23, 1918.

A. M.														
6:29	955.2	16.1	78	s.	4.5	444	955.2	16.1		78	14.27	s.	4.5	1/10 A.Cu., wnw.
						500	948.9	16.0		77	14.00	s.	6.9	
						750	921.6	15.3		71	12.34	s.	17.6	
6:34	955.2	16.4	77	s.	4.9	808	915.1	15.2	0.25	70	12.09	s.	20.1	
						1,000	894.6	15.7		63	11.24	sw.	17.0	
6:49	955.1	16.8	77	s.	6.7	1,157	878.1	16.1	−0.26	58	10.61	sw.	14.3	
						1,250	868.4	15.7		61	10.88	wsw.	11.0	
8:18	955.0	19.1	72	s.	7.6	1,434	850.0	15.0	0.64	67	11.42	wnw.	4.6	
8:54	955.0	20.0	69	s.	8.0	1,265	867.1	16.5	−0.88	62	11.64	sw.	9.4	
						1,250	868.4	16.4		62	11.56	sw.	9.4	
						1,000	894.6	14.2		64	10.36	ssw.	9.4	
8:59	955.0	20.2	69	s.	7.2	992	895.6	14.1	0.94	64	10.30	ssw.	9.4	
9:08	955.0	20.4	68	s.	6.7	779	918.4	16.1	1.28	75	13.72	ssw.	8.7	
						750	921.6	16.5		74	13.89	ssw.	8.5	
						500	948.9	19.7		68	15.61	s.	7.0	
9:12	955.0	20.4	66	s.	6.7	444	955.0	20.4		66	15.82	s.	6.7	Few A.Cu., wnw.

June 24, 1918.

A. M.														
7:15	955.9	15.4	90	nne.	8.5	444	955.9	15.4		90	15.75	nne.	8.5	
						500	949.8	14.7		81	13.55	nne.	9.5	
7:19	955.9	15.7	87	n.	8.9	698	927.5	12.4	1.18	49	7.06	ne.	13.0	Altitude of St.Cu. base about 800 m.
						750	921.9	13.1		49	7.39	ne.	12.3	
						1,000	895.0	16.7		49	9.31	ne.	9.0	
7:52	956.3	16.9	83	nne.	7.2	1,159	879.0	18.8	−1.39	49	10.63	ne.	7.0	
						1,250	869.4	18.3		48	10.09	ne.	6.9	
						1,500	845.0	16.8		45	8.61	n.	6.7	
						1,750	821.4	15.3		42	7.30	nne.	6.6	5/10 A.Cu., wnw.; 3/10 St.Cu., n.
9:52	957.6	19.3	79	nne.	8.0	1,811	815.4	14.9	0.54	41	6.95	nnw.	6.5	Altitude of St.Cu. base about 1,050 m.
						1,750	821.4	15.2		43	7.43	nnw.	6.5	
						1,500	846.1	16.5		49	9.20	nnw.	6.7	
						1,250	871.8	17.5		55	11.00	n.	6.8	
10:45	958.0	19.0	78	n.	8.0	1,071	890.1	18.4	−2.02	60	12.70	n.	6.9	
						1,000	897.6	17.0		71	13.76	n.	7.1	
10:49	958.0	19.1	78	n.	7.2	858	912.7	14.1	0.70	93	14.96	n.	7.6	
						750	924.0	14.9		90	15.25	n.	7.6	
10:59	958.1	19.3	78	n.	7.6	600	940.9	15.9	2.24	86	15.54	n.	7.5	
						500	951.8	18.1		81	16.82	n.	7.0	
11:01	958.1	19.4	78	n.	6.7	444	958.1	19.4		78	17.57	n.	6.7	6/10 A.Cu., wnw.; 3/10 St.Cu., n.

June 25, 1918.

A. M.														
7:41	960.5	12.0	87	s.	4.5	444	960.5	12.0		87	12.21	s.	4.5	1/10 Cl.St., sw.
						500	954.4	12.8		84	12.42	s.	5.1	
						750	927.0	16.7		70	13.31	ssw.	7.9	
7:54	960.4	17.6	87	s.	4.9	771	924.4	17.2	−1.53	69	13.54	ssw.	8.1	
						1,000	900.0	19.0		59	12.96	ssw.	9.4	
						1,250	874.0	21.1		49	12.26	sw.	10.7	
8:05	960.4	18.1	88	s.	4.9	1,277	871.4	21.3	−0.81	48	12.16	sw.	10.9	7/10 A.Cu., w.
						1,500	849.0	19.4		47	10.59	wsw.	10.8	
						1,750	825.0	17.3		47	9.28	wsw.	10.7	
						2,000	800.6	15.2		46	7.94	w.	10.6	
8:25	960.3	20.0	75	se.	4.9	2,087	792.8	14.5	0.84	46	7.59	w.	10.6	
						2,250	777.0	13.0		50	7.49	w.	11.1	
						2,500	753.6	10.7		57	7.34	w.	12.0	
						2,750	731.8	8.3		64	7.01	w.	12.8	
9:44	959.6	21.8	73	ssw.	5.4	2,798	727.7	7.9	0.93	65	6.92	w.	13.0	
						3,000	710.2	6.3		70	6.68	w.	12.6	
						3,250	688.9	4.2		77	6.35	w.	12.2	
						3,500	668.5	2.2		84	6.01	w.	11.8	
						3,750	643.1	0.2		90	5.58	w.	11.3	4/10 A.Cu., w.; 2/10 St.Cu., w.
10:29	959.3	22.0	76	ssw.	5.4	3,882	637.5	−0.9	0.84	94	5.33	w.	11.1	
						3,750	643.1	0.2		90	5.58	w.	11.0	
						3,500	668.5	2.4		83	6.03	w.	10.8	
						3,250	688.9	4.6		76	6.44	wsw.	10.6	
						3,000	710.2	6.7		69	6.77	wsw.	10.5	8/10 St.Cu., w.
11:08	959.0	21.0	76	ssw.	4.9	2,770	730.6	8.7	0.94	63	7.09	wsw.	10.3	Rain from 11:10 to 11:30 a. m.
						2,750	732.1	8.9		58	6.61	wsw.	9.7	

TABLE 9.—*Free-air data from kite flights at Ellendale Aerological Station, June, 1918*—Continued.

June 25, 1918—Continued.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
						2,500	754.0	11.2	.....	56	7.45	wsw.	9.4	
						2,250	777.0	13.6	.....	51	7.95	wsw.	8.6	
						2,000	800.6	15.9	.....	45	8.13	wsw.	7.8	
11:23	958.8	21.1	80	ssw.	4.0	1,904	809.5	16.8	0.78	43	8.23	wsw.	7.5	
						1,750	825.0	18.0	.....	42	8.67	wsw.	7.1	
						1,500	848.1	19.9	.....	41	9.53	sw.	6.4	
						1,250	873.0	21.9	.....	40	10.51	sw.	5.8	
11:36	958.7	21.1	81	ssw.	4.0	1,005	898.3	23.8	−5.32	39	11.50	ssw.	5.1	
11:40	958.6	21.1	81	ssw.	4.0	881	911.3	17.2	0.98	87	17.07	ssw.	6.4	
						750	926.0	18.5	.....	85	18.11	ssw.	5.7	
						500	952.5	20.9	.....	81	20.02	ssw.	4.3	
11:47	958.6	21.5	80	ssw.	4.0	444	958.6	21.5	.....	80	20.52	ssw.	4.0	7/10 St.Cu., w.
June 26, 1918.														
A. M.														
6:53	956.7	17.9	68	nw.	7.2	444	956.7	17.9	.....	68	13.95	nw.	7.2	Cloudless.
						500	950.6	18.0	.....	64	12.67	nw.	9.5	
						750	923.5	18.6	.....	44	9.49	nw.	19.8	
7:01	956.7	18.2	65	nw.	7.2	773	920.7	18.7	−0.21	42	9.06	nw.	20.8	
						1,000	896.8	17.2	.....	48	9.42	nw.	18.1	
						1,250	870.8	15.5	.....	54	9.01	nw.	15.1	
7:29	957.0	18.9	61	nw.	9.4	1,464	849.2	14.1	0.61	60	9.65	nw.	12.5	
						1,500	845.6	14.0	.....	59	9.43	nw.	13.0	
						1,750	821.0	13.1	.....	51	7.69	wnw.	16.5	
						2,000	796.6	12.2	.....	43	6.11	wnw.	20.2	
7:41	957.2	19.3	58	nw.	11.2	2,014	795.4	12.2	0.35	43	6.11	wnw.	20.2	
						2,250	773.0	9.5	.....	44	5.22	wnw.	18.6	
						2,500	750.0	6.7	.....	46	4.51	w.	16.9	
8:10	957.5	19.5	56	nw.	13.4	2,594	741.9	5.6	1.14	46	4.19	w.	16.3	
						2,750	728.0	4.3	.....	48	3.99	w.	17.9	
						3,000	706.0	2.2	.....	50	3.58	w.	20.4	
						3,250	684.9	0.2	.....	53	3.29	wsw.	22.9	
8:39	957.9	19.5	56	nw.	13.0	3,440	668.5	−1.4	0.86	55	2.99	wsw.	24.8	
						3,250	685.3	0.3	.....	52	3.24	wsw.	23.5	
						3,000	706.6	2.5	.....	47	3.44	wsw.	21.8	
						2,750	728.6	4.7	.....	43	3.67	w.	20.1	
						2,500	750.7	6.9	.....	38	3.78	w.	18.3	
9:01	958.1	19.3	54	nw.	14.3	2,435	756.6	7.5	0.80	37	3.84	w.	17.9	
						2,250	773.5	9.0	.....	37	4.25	w.	17.7	
						2,000	796.6	11.0	.....	36	4.73	wnw.	17.4	
						1,750	821.0	13.0	.....	36	5.39	wnw.	17.1	Few St.Cu., nw.
9:30	958.3	19.8	50	nw.	13.0	1,627	833.7	14.0	0.96	36	5.75	wnw.	17.0	
						1,500	846.0	15.2	.....	30	5.18	wnw.	17.6	
						1,250	871.4	17.6	.....	19	3.82	wnw.	18.7	
9:52	958.4	19.9	47	nw.	15.6	1,241	872.6	17.7	−4.18	19	3.85	wnw.	18.7	
9:59	958.4	19.9	47	nw.	13.4	1,150	882.0	13.9	0.66	27	4.29	nw.	16.4	
						1,000	897.7	14.9	.....	36	6.10	nw.	15.4	
10:10	958.4	20.2	46	nw.	15.6	848	914.1	15.9	1.00	45	8.13	nw.	14.4	
						750	924.0	17.0	.....	45	8.66	nw.	14.2	
						500	952.0	19.8	.....	46	10.38	nw.	13.5	
10:15	958.4	20.4	46	nw.	13.4	444	958.4	20.4	.....	46	11.03	nw.	13.4	Few St.Cu., nw.
June 27, 1918.														
A. M.														
6:33	952.2	15.6	68	wnw.	7.6	444	952.2	15.6	.....	68	12.05	wnw.	7.6	1/10 St Cu., nw.
						500	946.0	15.8	.....	63	11.31	wnw.	8.9	
						750	918.9	16.7	.....	42	7.98	nw.	14.8	
6:46	952.2	15.9	67	wnw.	7.2	780	915.3	16.8	−0.36	41	7.81	nw.	15.5	
						1,000	892.0	14.6	.....	43	7.15	nw.	15.0	
						1,250	865.9	12.0	.....	46	6.45	nw.	14.4	
7:10	952.4	16.7	59	wnw.	8.0	1,447	845.8	10.0	1.02	48	5.89	nw.	13.9	
						1,500	840.5	9.5	.....	48	5.70	nw.	14.6	
						1,750	815.5	7.4	.....	50	5.15	wnw.	17.7	
						2,000	790.6	5.3	.....	52	4.63	wnw.	20.7	
7:33	952.7	17.3	54	wnw.	7.6	2,207	771.2	3.5	0.86	54	4.24	w.	23.3	
						2,250	766.9	3.1	.....	54	4.12	w.	23.5	
						2,500	742.6	0.6	.....	57	3.64	w.	24.5	
7:46	952.8	17.6	54	wnw.	7.6	2,638	730.1	−0.7	0.97	59	3.40	w.	25.1	
						2,750	720.0	−1.0	.....	57	3.20	w.	24.9	
						3,000	699.0	−1.8	.....	51	2.68	w.	24.5	
						3,250	678.4	−2.5	.....	46	2.28	w.	24.1	
8:16	953.1	18.0	54	wnw.	8.0	3,390	665.5	−2.9	0.36	43	2.06	w.	23.9	
						3,250	678.4	−2.3	.....	46	2.32	w.	24.2	Few A.Cu., nw.
						3,000	700.0	−1.3	.....	52	2.85	w.	24.8	
						2,750	721.8	−0.2	.....	58	3.49	w.	25.4	
						2,500	743.8	0.9	.....	64	4.17	w.	26.0	
8:56	953.3	19.0	50	nnw.	9.4	2,492	744.7	0.9	0.77	64	4.17	w.	26.0	
						2,250	766.9	2.8	.....	62	4.63	w.	24.1	
						2,000	791.4	4.7	.....	59	5.04	w.	22.2	
						1,750	815.9	6.6	.....	57	5.56	w.	20.2	
9:42	953.3	19.0	42	nw.	10.7	1,541	836.5	8.2	0.92	55	5.98	w.	18.6	
						1,500	840.5	8.6	.....	54	6.03	w.	18.2	
						1,250	866.4	10.9	.....	51	6.65	w.	16.0	
						1,000	892.6	13.2	.....	47	7.13	wnw.	13.7	
10:05	953.3	19.4	39	nw.	10.3	790	915.3	15.1	1.42	44	7.55	wnw.	11.8	
						750	919.9	15.7	.....	44	7.85	wnw.	11.6	
						500	947.0	19.2	.....	41	9.12	nw.	10.5	
10:12	953.3	20.0	40	nw.	10.3	444	953.3	20.0	.....	40	9.35	nw.	10.3	1/10 Cu., nw.

TABLE 9.—*Free-air data from kite flights at Ellendale Aerological Station, June, 1918*—Continued.

June 28, 1918.

Time.	Surface.					At different heights above sea.								Remarks.
	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°C.	%		m. p. s.	m.	*mb.*	°C.		%	*mb.*		m. p. s.	
6:54	955.0	12.5	69	wnw.	3.6	444	955.0	12.5	.....	69	10.00	wnw.	3.6	9/10 St., wsw.
						500	948.8	12.5	.....	66	9.56	wnw.	5.4	
						750	921.0	12.3	.....	53	7.83	nw.	13.5	
7:02	955.0	12.7	67	wnw.	3.6	788	916.6	12.8	−0.09	51	7.54	nw.	14.7	
						1,000	893.5	11.2	.....	54	7.18	nw.	15.8	
						1,250	867.0	9.3	.....	57	6.68	wnw.	17.0	
						1,500	841.8	7.4	.....	60	6.18	wnw.	18.3	
7:26	955.3	13.3	66	wnw.	4.5	1,525	839.2	7.2	0.76	60	6.10	wnw.	18.4	
						1,750	816.9	5.2	.....	61	5.40	wnw.	18.7	
						2,000	792.4	3.1	.....	63	4.81	wnw.	19.1	
7:43	955.5	14.4	61	wnw.	4.0	2,033	787.1	2.6	0.97	63	4.64	wnw.	19.2	
						2,250	768.0	1.2	.....	60	4.00	wnw.	19.7	
						2,500	744.5	−0.5	.....	55	3.22	wnw.	20.2	
						2,750	721.9	−2.2	.....	51	2.60	wnw.	20.8	
8:05	955.7	15.6	61	wnw.	4.5	2,793	718.0	−2.5	0.69	50	2.48	wnw.	20.9	
						3,000	699.7	−4.1	.....	48	2.08	wnw.	20.9	
						3,250	677.4	−6.0	.....	47	1.73	w.	20.8	
8:25	955.6	15.6	59	wnw.	5.8	3,332	670.7	−6.6	0.76	46	1.61	w.	20.8	
						3,500	656.3	−6.1	.....	38	1.39	w.	21.9	
8:37	955.5	15.8	58	wnw.	3.1	3,579	649.3	−5.8	−0.50	34	1.28	w.	22.4	9/10 St.Cu., wsw.
						3,500	656.3	−6.3	.....	34	1.22	w.	20.5	
8:44	955.5	16.4	58	wnw.	3.6	3,477	657.8	−6.5	0.77	34	1.20	w.	20.0	
						3,250	678.0	−4.7	.....	39	1.61	w.	21.3	
						3,000	699.5	−2.8	.....	44	2.13	wnw.	22.7	
9:17	955.4	18.1	53	wnw.	5.4	2,778	719.4	−1.1	0.63	49	2.73	wnw.	23.9	
						2,750	721.9	−0.9	.....	48	2.72	wnw.	23.6	
						2,500	744.5	0.7	.....	44	2.83	wnw.	21.0	
						2,250	768.0	2.2	.....	39	2.79	wnw.	18.4	
						2,000	792.4	3.8	.....	34	2.73	wnw.	15.9	
9:56	955.4	18.9	47	wnw.	8.9	1,762	816.1	5.3	0.91	29	2.58	wnw.	13.4	
						1,750	817.5	5.4	.....	30	2.69	wnw.	13.4	
						1,500	842.8	7.7	.....	52	5.47	wnw.	12.8	
10:13	955.2	19.1	47	wnw.	8.0	1,335	859.3	9.2	1.08	67	7.80	wnw.	12.4	
						1,250	868.0	10.1	.....	65	8.03	wnw.	12.5	
						1,000	894.2	12.8	.....	58	8.57	wnw.	12.7	
10:27	955.1	19.8	45	wnw.	8.0	825	913.3	14.7	1.39	53	8.87	wnw.	12.9	
						750	921.5	15.7	.....	51	9.10	wnw.	11.9	
						500	948.8	19.2	.....	44	9.79	wnw.	8.7	
10:35	955.0	20.0	43	wnw.	8.0	444	955.0	20.0	.....	43	10.05	wnw.	8.0	5/10 Cu., wnw.

June 29, 1918.

A. M.														
10:33	963.8	13.5	62	n.	6.7	444	963.8	13.5	.....	62	9.59	n.	6.7	10/10 St.Cu., w.
						500	957.5	12.7	.....	64	9.40	n.	7.1	
11:05	963.8	14.2	60	n.	7.6	726	931.8	9.6	1.38	70	8.36	n.	8.6	
						750	928.2	9.3	.....	71	8.32	n.	8.5	
						1,000	901.6	6.5	.....	87	8.42	nnw.	7.1	
P. M.														
12:12	964.2	13.3	61	n.	5.8	1,068	894.3	5.7	0.97	91	8.34	nnw.	6.7	
						1,000	901.6	6.3	.....	89	8.50	nnw.	6.6	
12:34	964.2	13.0	63	nnw.	5.8	802	923.6	8.1	.....	83	8.96	nnw.	6.4	10/10 St.Cu., w. Kites fell to ground on account of insufficient wind to sustain them.

June 30, 1918.

A. M.														
6:09	966.6	8.5	86	w.	5.4	444	966.6	8.5	.....	86	7.77	w.	5.4	2/10 St.Cu., nw.
						500	960.4	8.4	.....	86	7.71	w.	5.7	
						750	931.9	5.1	.....	83	7.30	wnw.	7.1	
						1,000	904.0	4.8	.....	81	6.97	wnw.	8.5	
						1,250	877.0	4.5	.....	79	6.65	nw.	9.9	
7:24	967.0	10.5	72	wnw.	2.7	1,460	854.7	4.3	0.12	77	6.40	nw.	11.1	8/10 St.Cu., nw.
						1,500	850.6	3.9	.....	79	6.38	nw.	11.3	
						1,750	825.4	1.6	.....	90	6.17	nw.	12.3	
7:43	967.1	11.6	68	wnw.	4.0	1,853	814.5	0.6	0.94	95	6.06	nw.	12.7	
						2,000	800.0	−0.4	.....	96	5.67	nw.	13.7	
						2,250	775.4	−2.0	.....	97	5.01	nw.	15.3	
						2,500	751.3	−3.6	.....	99	4.47	wnw.	17.0	
8:05	967.2	12.1	66	wnw.	4.0	2,754	727.9	−5.3	0.60	100	3.91	wnw.	18.7	
						2,500	751.3	−3.9	.....	99	4.37	wnw.	16.4	
						2,250	775.4	−2.6	.....	98	4.82	wnw.	14.1	2/10 St.Cu., wnw.
9:07	967.1	13.8	50	wnw.	4.0	2,166	784.0	−2.1	1.03	98	5.03	wnw.	13.3	
						2,000	800.0	−0.4	.....	96	5.67	wnw.	12.2	
						1,750	825.4	2.2	.....	94	6.73	nw.	10.4	
9:35	966.8	16.3	52	wnw.	3.1	1,528	848.5	4.5	0.94	92	7.75	nw.	8.9	
						1,500	851.1	4.7	.....	91	7.77	nw.	8.8	
						1,250	877.7	7.1	.....	81	8.17	nw.	7.9	
						1,000	904.6	9.5	.....	71	8.43	nw.	7.0	
9:58	966.5	16.9	50	nw.	5.8	813	925.1	11.2	1.60	64	8.51	nw.	6.3	
						750	932.0	12.2	.....	62	8.81	nw.	6.1	
						500	960.4	16.2	.....	55	10.13	nnw.	5.5	
10:05	966.5	17.1	53	nnw.	5.4	444	966.5	17.1	.....	53	10.34	nnw.	5.4	5/10 Cu., nw.